DOCUMENT RESUME

ED 232 461 FL 013 835

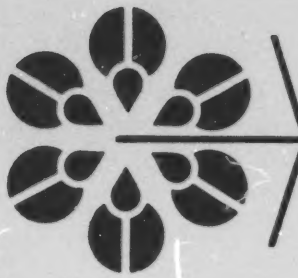
AUTHOR Morrison, Frances; And Others
TITLE French Proficiency and General Progress: Students in Elementary Core French Programs, 1973-1980, and in Immersion and Bilingual Programs, Grades 8, 10 and 12, 1980. Evaluation of the Second Language Learning (French) Programs in the Schools of the Ottawa and Carleton Boards of Education. Seventh Annual Report, December 1980.
INSTITUTION Ottawa Board of Education (Ontario). Research Centre.
PUB DATE Dec 80
NOTE 180p.; For related documents, see FL 013 836-837.
AVAILABLE FROM Research Centre, Ottawa Board of Education, 330 Gilmour St., Ottawa, Ontario K2P 0P9, Canada ($6.00).
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS Academic Achievement; Elementary Secondary Education; *Fles; *French; *Immersion Programs; Language Proficiency; Program Effectiveness; *Program Evaluation; Second Language Instruction; *Second Language Programs

ABSTRACT

The effectiveness of alternative programs for teaching French as a second language in Ottawa and Carleton schools was evaluated. French proficiency, English skills, and academic achievement were assessed among students in grades 3-8 in the core French program, grades 4-6 in extended French, grades 10 and 12 in the bilingual program, and grade 8 students from primary and late entry immersion groups. In general, French proficiency scores were higher for those students who had the most exposure to French instruction, and gains in proficiency were made with each grade level. Among the immersion students, those who entered the program later had higher mathematics scores, but there was little difference with respect to English proficiency or achievement. (RW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****



research for action

ED232461

FRENCH PROFICIENCY AND GENERAL PROGRESS:

Students in elementary core French programs, 1973-1980, and in immersion and bilingual programs, grades 8, 10 and 12, 1980

Evaluation of the Second Language Learning (French) Programs in the Schools of the Ottawa and Carleton Boards of Education

Seventh Annual Report, December 1980

The Ottawa Board of Education
The Carleton Board of Education

Principal Investigator: Frances Morrison

Research Staff: R. Bonyun
C. Pawley
M. Walsh

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

F. Morrison

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FL013835

This research project was funded under contract by the Ministry of Education, Ontario

research centre / centre de recherches
The Ottawa Board of Education / Le Conseil scolaire d'Ottawa
Location: 662 Lyon St. S., K1S 3Z2, tel. 563-2408 Mailing address: 330 Gilmour St., K2P 0P9

ABSTRACT

The evaluation of alternative programs for the teaching of French as a second language in the schools of the Ottawa and Carleton Boards of Education was supported in 1980 for the seventh year by a contract with the Ministry of Education, Ontario. One of the major aspects of the research was an examination of the French proficiency of core French students at the grade 8 level in both boards. A second area of investigation was the French proficiency of grade 8 and 10 students who had been enrolled in primary- and late-entry immersion and who were still in a bilingual program. The proficiency of a group of grade 12 students who had entered immersion or a bilingual program in grade 6, 7 or 9 was also investigated. In addition, tests of basic skills in English were given to grade 8 immersion students and to comparison students in the English program. As in previous years, tracing of students enrolled in various programs continued to make it possible to examine enrolment patterns and to identify subgroups for more intensive study. Some of the major findings are indicated below.

Core French: Grade 8, 1980

1. Listening comprehension scores were significantly higher for students with 1050 cumulative hours of French instruction (K-8), as compared with those who had a cumulative total of 705 hours, both before and after adjustment for differences in ability.

2. On two of five parts of a speaking test, subtest scores showed significant differences between students with 1050 hours and those with 705 hours of instruction.

Core French: Grades 6-8, 1978-1980

1. Listening comprehension scores were higher for students at each of these three grade levels in the 40-minute core program (Ottawa) than for those with 20 minutes daily to grade 5 and 40 minutes thereafter (Carleton).

2. A cross-sectional study in 1980 replicated these results at the grade 6 and the grade 8 level, after adjustment for differences in ability.

3. For a subsample of students tested in both grade 7 and grade 8, there was a significant increase in listening comprehension scores in both boards from one year to the next, as well as a difference between boards at each grade level.

4. On different speaking tests given in grades 7 and 8, the groups with more total French instructional time tended to have higher scores, but some of the subtests were too difficult for use at this level.

Core French: Grades 3-5, 1973-1977

1. Although the listening comprehension test used in the early years of the core program tended to be too difficult, students in the 40-minute daily program scored significantly higher than their comparisons at each grade level and showed a significant gain from one grade level to the next.

2. On listening comprehension tests given at the beginning and end of the year, spring results for grades 3 and 4 tended to be higher than results for comparable groups at the beginning of grades 4 and 5 respectively.

3. On two parts of a speaking test given at the end of grades 3 and 5, significant gains were made over the two-year period. Differences between the groups in the two boards became more pronounced during this time and favoured the Ottawa group, which had about twice as much time spent in French instruction.

Extended French or CEL: Grades 4-6, 1978-1980

1. Grade 4 and 5 students who had been in the CEL program in Carleton, with 20 minutes of French daily in K to 3 and about an hour each day in grades 4 and 5, obtained significantly higher scores on listening comprehension tests than students at the same grade level in the 40-minute core program, who had received about the same total amount of instructional time.

2. Grade 6 students who had spent two years in the CEL program obtained listening comprehension scores similar to those of Carleton grade 8 students, who had received about the same amount of French language instruction.

Sex Differences: Grades 6-8 core, 1979-1980

1. At the grade 7 level in 1979, the total group of girls in Ottawa and Carleton had significantly higher scores than the total group of boys, in spite of program differences between the two boards.

2. In each board, at the grade 7 level in 1979 and at the grade 6, 7 and 8 level in 1980, there were significant differences in the same direction in the listening comprehension scores of boys and girls.

Intercorrelations: Grades 6-8, 1978-1980

1. Relatively high correlations (0.63 to 0.84) were found between listening comprehension tests given in the same year or after an interval of about a year.

2. Correlations of the same magnitude (0.59 to 0.81) were found between listening comprehension tests and speaking tests and between the subtests of the speaking tests used.

3. Correlations between ability measures and the scores on both French listening comprehension and speaking tests tended to be low (0.26 to 0.48).

Grade 12 Bilingual Program, 1980

1. No significant differences on tests of reading and writing skills were found between groups of students who began late-entry immersion or bilingual programs at grade 6, 7 or 9, but steady increases from the grade 9 to the grade 12 level were found for the two groups of grade 7 entry students for whom scores were available.

2. Scores of these grade 12 students on a French cloze test were about the same as those of two groups of grade 8 primary-entry immersion students.

3. Mean scores of the same groups on a test designed for Quebec francophone students at the Secondaire IV level were at the fourth stanine, or between the 25th and 40th percentiles.

Grade 10 Bilingual Program, 1980

1. The tested French proficiency of groups of students who had entered late-entry immersion in Ottawa or Carleton at grade 6 or grade 7 or who came from Ottawa spearate schools was in most cases very similar.

2. Significant increases in scores between grade 8 and grade 10 were found for late-entry immersion students; on two of the tests the grade 10 scores were about the same as those of a group of grade 8 primary-entry immersion students tested in the same year.

Primary- and Late-entry Immersion: Grade 8, 1979-1980

1. The Carleton and Ottawa primary-entry groups performed similarly in 1980 on several of the tests given, but differences in favour

of the Carleton group were found on a test designed for Secondaire I in Quebec and on an oral interview test. On the tests used in 1979 the Carleton group performed consistently better.

2. The Carleton late-entry group had higher and less variable scores than the Ottawa late-entry group on the French interview test.

3. The primary-entry groups performed significantly better than the late-entry groups on nearly all of the measures of French proficiency used, as might be expected.

4. Few differences were found among the primary- and late-entry groups in the two boards with respect to English language aptitude or achievement in several areas; the Carleton late-entry group, however, had higher scores on three measures of mathematics achievement and aptitude than the Carleton primary-entry groups and than both primary- and late-entry groups in Ottawa.

Retention and Transfer in Immersion Groups

1. About two out of three students who entered immersion at the kindergarten level in 1971 and who remained in the Ottawa area were still in a program emphasizing French instruction, mainly at the grade 8 level, by the 1979-80 school year.

2. Of students from the K-71 cohort who transferred, over half did so before entering grade 2. In the K-74 cohort the pattern of transfers was somewhat different, with a higher proportion leaving immersion in grade 3 or later.

3. More boys than girls transferred to the English program, and more of the students transferring during grade 1 or grade 2 were below the expected grade level.

TABLE OF CONTENTS

Abstract i

List of Tables ix

List of Figures xv

Chapter One: Introduction 1

Chapter Two: Core French Proficiency, Grade 8, 1980 4

INTRODUCTION 4

Programs and Groups Studied 4

Instruments Used, 1973 to 1980 8
Listening comprehension 8
Speaking tests 12
Aptitude 13

RESULTS: GRADE 8, SPRING 1980 14

Listening Comprehension and Ability 15

French Speaking Test 18

SUMMARY 23

Chapter Three: Core French Proficiency, Grades 3-8, 1973-1980 . . 24

INTRODUCTION 24

RESULTS: IEA II LISTENING COMPREHENSION 25

Grades 6-8 Core, Ottawa and Carleton, 1978-1980 25

Grades 6-8 Core, Ottawa and Carleton, 1980 28

Grade 6 Former CEL, Carleton, 1980 34

Item Analysis, Grades 6-8, 1978-1980 35

RESULTS: OBE FRENCH COMPREHENSION TEST 39

Grades 6-8, Ottawa, 1980 39

RESULTS: OISE LISTENING COMPREHENSION TESTS 44

OISE 1, Grades 3-5, 1973-1979 44

OISE K, Grades 1 and 2, 1973-1976 50

SPEAKING TEST RESULTS 52

IEA I French Speaking, Grades 3 and 5, 1975 and 1977 . 52

French Speaking, Grades 7 and 8, 1979 and 1980 54

SEX DIFFERENCES: GRADES 6 TO 8, 1979 AND 1980 60

INTERCORRELATIONS: GRADES 6 TO 8, 1978 TO 1980 63
Listening Comprehension 63
Test-retest 63
Different listening comprehension tests 64
Listening Comprehension vs French Speaking 64
Ability vs French Proficiency 66
SUMMARY 68
Chapter Four: French Proficiency: High School Bilingual Programs 71
INTRODUCTION 71
Programs and Groups Studied 71
Instruments 73
IEA tests 73
Cloze test 74
Tests de français 74
Ability measures 75
RESULTS 75
Grade 10 Bilingual Program, 1980 75
IEA test results 75
Test de français 80
Test de mots à trouver 82
Aptitude tests 83
Grade 10 Special French, 1980 85
Grade 12 Bilingual Program, 1980 88
IEA test results 88
Test de français IV 92
Test de mots à trouver 93
Aptitude tests 95
Relationships among French Proficiency and Ability Scores 96
SUMMARY 99
Grade 10 Bilingual-Program Results 99
Grade 10 Special French Results 100
Grade 12 Bilingual-Program Results 101
Chapter Five: French Proficiency and General Achievement of Grade 8 Students in Primary- and Late-entry Immersion 103
INTRODUCTION: PROGRAMS AND STUDENT GROUPS 103

INSTRUMENTS 107
Tests of French Proficiency 107
Aptitude and Achievement Measures 108
Differential Aptitude Test 108
Canadian Tests of Basic Skills 109
Gates-MacGinitie Reading Test 109
English Story Completion Test 110
English Composition Test 110
FRENCH PROFICIENCY RESULTS 110
French Reading and Writing Tests 110
French reading and language: primary-entry groups 111
French reading and language: late-entry groups . 112
French writing skills: primary- and late-entry groups 113
Test of Oral Production 115
Scoring procedures 115
Samples 117
Interview test results 117
APTITUDE AND ACHIEVEMENT RESULTS 121
Aptitude 121
Achievement 122
Reading 123
Language and Study Skills 123
English cloze and composition 125
Mathematics 126
SUMMARY 127
Chapter Six: Student Tracing: the K-71 and K-74 Cohorts 130
INTRODUCTION 130
GRADE AND PROGRAM LOCATION 131
The K-71 Cohort 131
The K-74 Cohort 135
TRANSFERS 138
The K-71 Cohort 138
The K-74 Cohort 143
NEW ENTRANTS 148
The K-71 Cohort 148
The K-74 Cohort 150
SUMMARY 150

Chapter Seven: Summary 152

INTRODUCTION 152

CORE FRENCH: GRADES 6-8, 1978-1980 153

INTERCORRELATIONS: GRADES 6-8, 1978-1980 155

CORE FRENCH: GRADES 3-5, 1973-1977 156

EXTENDED FRENCH OR CEL: GRADES 4-6, 1978-1980 156

GRADE 12 BILINGUAL PROGRAM, 1980 157

GRADE 10 BILINGUAL PROGRAM, 1980 158

PRIMARY- AND LATE-ENTRY IMMERSION: GRADE 8, 1979 AND 1980 . 159

RETENTION IN IMMERSION PROGRAMS 160

STUDENTS TRANSFERRING FROM IMMERSION PROGRAMS 160

CONCLUDING STATEMENT 161

References 163

LIST OF TABLES

Table		Page
2.1	Minutes per day and cumulative hours: core French and CEL	7
2.2	Grade level and board of samples taking four French listening comprehension tests from 1973 to 1980	11
2.3	French proficiency and ability test scores: grade 8 core, Ottawa and Carleton, 1980	16
2.4	IEA II listening comprehension scores adjusted for differences in ability, grade 8 core, Ottawa and Carleton, 1980	16
2.5	French speaking test results, grade 8 core, Ottawa and Carleton, spring 1980	18
2.6	Adjusted French speaking test results, grade 8 core, Ottawa and Carleton, spring 1980	19
	***	
3.1	IEA II French listening comprehension, grades 6-8 core French, Ottawa and Carleton, 1978-1980	26
3.2	IEA II French listening comprehension, longitudinal results for Carleton students, grades 6-8, 1978-1980	27
3.3	Ability and adjusted French proficiency scores, grades 6-8 core, Ottawa and Carleton, spring 1980	30
3.4	French listening and aptitude scores by school, grade 7, Carleton, 1979-1980	33
3.5	IEA II French listening comprehension, longitudinal results for Ottawa and Carleton, grades 7-8, 1979-1980	33
3.6	French listening comprehension results, CEL and core French, grade 6, Ottawa and Carleton, spring 1980	34
3.7	IEA II listening comprehension: longitudinal item analysis data, grades 6-8, Ottawa and Carleton, 1978-1980	36
3.8	IEA II listening comprehension: cross-sectional item analysis data, grades 6-8, Ottawa and Carleton, spring 1980	37
3.9	OBE French Comprehension Test results, grades 6, 7 and 8, Ottawa, 1980	40
3.10	OBE French Comprehension Test: verbs, results for grades 6-8, Ottawa, spring 1980	41

Table		Page
3.11	OBE French Comprehension Test: nouns, results for grades 6-8, Ottawa, spring 1980	42
3.12	Item analysis for OBE French Comprehension Test: verbs introduced in grades 3 and 4, results for grades 6-8, Ottawa, spring 1980	44
3.13	Revised OISE 1 results, grades 3-5, Core and CEL, Ottawa and Carleton, 1975-1979	45
3.14	OISE I results, grades 3-5 core, Ottawa and Carleton, 1973-74	49
3.15	OISE K listening results, grades 1 and 2, Ottawa and Carleton, 1973-74	50
3.16	OISE K listening results, grade 2, Ottawa, spring 1974 and 1976	51
3.17	French listening, speaking and ability results, grades 7 and 8, Ottawa and Carleton, 1979 and 1980	54
3.18	French speaking test results, parts 1 and 2, grade 7 and 8, Ottawa and Carleton, 1979 and 1980	55
3.19	Item analysis: French speaking test, part 1 (Vocabulary), Ottawa and Carleton, 1979 and 1980	56
3.20	Item analysis: French speaking test, part 2 (CCIF questions), Ottawa and Carleton, 1979 and 1980	57
3.21	French speaking test results, parts 3, 4 and 5, grades 6 and 8, Ottawa and Carleton, 1980	58
3.22	Sex differences in French proficiency scores within boards, grade 6, 7 and 8 core French, Ottawa and Carleton, spring 1979 and 1980	60
3.23	Sex differences in ability and adjusted French listening test scores, grade 6, 7 and 8 core French, Ottawa and Carleton, spring 1979 and 1980	61
3.24	Sex differences in French proficiency scores: total group differences, grade 6, 7 and 8 core French, Ottawa and Carleton, spring 1979 and 1980	62
3.25	Correlations between different administrations of the IEA II French listening test, grades 6-8 core French, Ottawa and Carleton, 1978-1980	63
3.26	Correlations between the IEA II French listening test (1978-1980) and the OBF French listening comprehension test (1980), grades 6-8, Ottawa	64

Table		Page
4.10	Results of grade 9 verbal ability measures for Ottawa groups in grade 10 of bilingual high schools, spring 1980	84
4.11	Results of grade 9 nonverbal ability measures for Ottawa groups in grade 10 of bilingual high schools, spring 1980	84
4.12	French proficiency results for Ottawa grade 10 students taking special French courses, spring 1980	86
4.13	Grade 9 aptitude test results for Ottawa grade 10 students taking special French courses, spring 1980	87
4.14	French proficiency results on IEA tests for Ottawa grade 10 special French and bilingual-program groups, spring 1980	88
4.15	Grade 12 French proficiency results: IEA tests for five bilingual-program groups, Ottawa and Carleton, spring 1980	89
4.16	Grade 9, 10 and 12 French proficiency results: IEA tests for three bilingual-program groups, Ottawa and Carleton, 1977-1980	89
4.17	Grade 12 French proficiency results: IEA tests for bilingual-program groups, Ottawa and Carleton, 1977-1980	91
4.18	Grade 12 French proficiency results: Test de français IV, Part 3, for five bilingual-program groups, Ottawa and Carleton, spring 1980	92
4.19	Normative data for Test de français IV, Province of Quebec francophone norms, 1975-76	93
4.20	Test de mots à trouver results for bilingual-program, special French and immersion groups, grades 8, 10 and 12, spring 1980	94
4.21	Results of grade 9 ability measures for Ottawa groups in grade 12 of bilingual high schools, spring 1980	95
4.22	Correlations among French proficiency scores for five grade 10 bilingual-program groups, Ottawa and Carleton, spring 1980	96
4.23	Correlations between grade 8 and grade 10 French proficiency scores for three grade 10 bilingual-program groups, Ottawa and Carleton, spring 1980	97
4.24	Correlations between ability and French proficiency scores for four grade 10 bilingual-program groups, Ottawa, spring 1980	98

***

Table		Page
5.1	Enrolment in primary-entry immersion in grades 6 to 8, Ottawa and Carleton, 1977-1980	104
5.2	Enrolment in late-entry immersion in grades 6 to 8, Ottawa and Carleton, 1977-1980	104
5.3	Amount of French instruction from kindergarten to grade 8 in primary- and late-entry immersion programs, Ottawa and Carleton, 1971-1980	106
5.4	Number of schools and students in 1980 grade 8 immersion subsamples, Ottawa and Carleton	106
5.5	French proficiency of primary-entry grade 8 immersion groups: reading and language skills, Ottawa and Carleton, spring 1980	111
5.6	French proficiency of late-entry grade 8 immersion groups: reading and language skills, Ottawa and Carleton, spring 1980	112
5.7	French writing skills of primary- and late-entry grade 8 immersion groups, Ottawa and Carleton, spring 1980	114
5.8	Competency levels used with oral interview test, spring 1980	116
5.9	Oral interview test results, grade 8 primary- and late-entry immersion, Ottawa and Carleton, spring 1980	118
5.10	DAT results for grade 8 primary- and late-entry immersion groups, Form L or equivalent, Ottawa and Carleton, spring 1980	121
5.11	Reading achievement results for primary- and late-entry immersion groups, Ottawa, spring 1980	123
5.12	CTBS results for primary- and late-entry immersion groups, Ottawa and Carleton, spring 1980	124
5.13	English cloze test results, primary- and late-entry immersion groups, Ottawa and Carleton, spring 1980	125
5.14	English composition test results, primary- and late-entry immersion groups, Ottawa and Carleton, spring spring 1980	126
5.15	Mathematics results for primary- and late-entry immersion groups, Ottawa and Carleton, spring 1980	127

***

Table		Page
6.1	Grade and program of K-71 cohort, October 1979	133
6.2	Program location of K-71 cohort students still in Ottawa or Carleton schools, October 1979	134
6.3	Grade progress of K-71 cohort students still in original program, October 1979	135
6.4	Grade and program of K-74 cohort, October 1979	136
6.5	Program location of K-74 cohort students still in Ottawa or Carleton schools, October 1979	137
6.6	Grade progress of K-74 cohort students still in original program, October 1979	138
6.7	Grade and program of transfer and initial English groups from K-71 cohort, October 1979	139
6.8	Transfers from primary-entry immersion group of the K-71 cohort by time of transferring, 1971-1979	140
6.9	Grade placement in October 1979 by time of transfer for K-71 cohort transfer group	141
6.10	Program in October 1979 by time of transfer for K-71 cohort transfer group	141
6.11	Sex by time of transfer for K-71 cohort transfer group	141
6.12	Grade and program of transfer and initial English groups from K-74 cohort, October 1979	144
6.13	Transfers from the primary-entry immersion group of the K-74 cohort by time of transferring, 1974-1979	145
6.14	Grade placement in October 1979 by time of transfer for K-74 cohort transfer group	146
6.15	Program in October 1979 by time of transfer for K-74 cohort transfer group	146
6.16	Sex by time of transfer for K-74 cohort transfer group	146
6.17	Grade level by sex for transfer group of the K-74 cohort	147
6.18	Grade and program of new entrants associated with K-71 cohort, October 1979	149
6.19	Grade and program of new entrants associated with K-74 cohort, October 1979	150

***

LIST OF FIGURES

Figure		Page
2.1	Distribution of listening comprehension scores, Ottawa and Carleton, grade 8 core, 1980	17
2.2	Distribution of French speaking test scores, Ottawa and Carleton, grade 8 core, 1980	20
2.3	Distribution of French speaking test part 2 scores, Ottawa and Carleton, grade 8 core, 1980	21
2.4	Distribution of French speaking test part 4 scores, Ottawa and Carleton, grade 8 core, 1980	22
	***	
3.1	Cross-sectional results adjusted for ability: IEA II French listening comprehension, grades 6, 7 and 8 core French, Ottawa and Carleton, spring 1980	31
3.2	OBE French Comprehension Test: verbs, results for grades 6-8, Ottawa, spring 1980	41
3.3	OBE French Comprehension Test: nouns, results for grades 6-8, Ottawa, spring 1980	42
3.4	Relationship between time in French and listening comprehension scores, grades 3-5 core French and CEL, Ottawa and Carleton, 1975-1979	48
3.5	IEA I French speaking test results, grades 3 and 5, Ottawa and Carleton, 1975 and 1977	53
	***	
4.1	IEA IVS French reading results for three bilingual-program groups, Ottawa and Carleton, 1977-1980	90
4.2	IEA IV French writing results for three bilingual-program groups, Ottawa and Carleton, 1977-1980	90
	***	
5.1	Distribution of oral interview test ratings, grade 8 primary-entry immersion, Ottawa and Carleton, spring 1980	119
5.2	Distribution of oral interview test ratings, grade 8 late-entry immersion, Ottawa and Carleton, spring 1980	120
	***	

Chapter One

INTRODUCTION

From 1973 to 1980 evaluation of various alternative programs for the teaching of French as a second language has taken place in the schools of the Ottawa and the Carleton Boards of Education, with continued funding by the Ministry of Education of Ontario. During this seven-year period new core French programs for kindergarten through grade 8 have been introduced in both boards, with increases in the amount of time allocated to instruction in French. For several years the Carleton Board also experimented with an 'extended' French program, in which a subject was taught in French at various grade levels, but the program was discontinued in 1979. French immersion programs beginning in kindergarten have been available in both boards long enough for the first groups to be reaching high school in the fall of 1979, and graduates of the complete 'late-entry' programs, beginning in grade 6 in Ottawa or grade 7 in Carleton, had reached grade 12 by the 1979-80 school year. Bilingual programs at the secondary level have also been available since 1972 in Ottawa and 1975 in Carleton. In spite of a general decline in enrolment, the entire immersion/bilingual sequence continues to show an increase in enrolment in the two boards, with over 8000 students enrolled in immersion programs at the elementary level and about 1000 in secondary bilingual programs in the 1979-80 school year.

The research contract for 1979-80 has again focussed on the French proficiency of students in the various alternative programs. Students in the leading edge of the new 40-minute daily core program in Ottawa were completing grade 8 and it was possible to continue comparisons between the two core programs in the Ottawa-Carleton area, where

different total amounts of time were devoted to the teaching of French as a second language. Individual tests of oral production as well as tests of listening comprehension were included in the 1980 test battery for students in the core programs. Although it was not part of the original contract, the research team also undertook to summarize the data on the proficiency of students in core programs which had been collected over the period from 1973 to 1980.

In 1978-79, relatively small groups of primary-entry immersion students had reached grade 8, and in the spring of 1980 larger numbers of these students were available for testing. It was therefore possible to compare results of French proficiency tests of grade 8 students in the primary- and late-entry programs of both boards over a two-year period. Tests of basic skills in English were also given to these students in 1980 and to comparison students in the English program. The results for immersion students are included in the present report and analysis of the results for the comparison groups should be completed early in 1981.

At the high school level, emphasis during 1980 was on the French proficiency of students in grades 10 and 12 in bilingual high schools. A group of graduates of primary- and late-entry programs in the Ottawa board took specially designed French courses and their French proficiency was also examined.

As in previous years, tracking of students who had enrolled in French immersion and in English kindergarten in 1971 and 1974 was continued. This process made it possible to examine the patterns of retention and transfer in these programs and to identify subgroups for more intensive study.

The Seventh Annual Report of the FRENCH Project has five major chapters, in addition to this introductory section and a summary chapter. Chapters Two and Three provide results of the testing of students in core programs, with 1980 results for grade 8 in Chapter Two and a summary of findings for grades 3 through 8 in Chapter Three. The next two chapters deal with immersion and bilingual programs: Chapter Four discusses results for grade 10 and 12 students of bilingual high schools, while Chapter Five gives an overview of the French proficiency and general achievement of students in primary- and late-entry immersion. Chapter Six reports the results of tracing the progress of students in the K-71 and K-74 cohorts, the majority of whom were in grades 8 and 5 respectively in 1979-80.

Chapter Two

CORE FRENCH PROFICIENCY, GRADE 8, 1980

INTRODUCTION

Programs and Groups Studied

Since 1973, as part of a contract with the Ministry of Education, the French proficiency of representative groups of students in the core French programs of Ottawa and Carleton Board schools has been examined each year. The programs being followed by the groups tested have been of three kinds and are described briefly below. Both the time devoted to instruction in French and the way in which this time is distributed are likely to affect the level of proficiency attained, and the influence of both factors has been examined where possible.

In the Ottawa Board of Education the groups tested represented the leading edge of students following a program which, starting in 1972, increased the amount of time devoted to French from 20 minutes a day to 40 minutes in all grades except kindergarten. The students who completed grade 8 in the spring of 1980 were the first to have followed this program from kindergarten and have had about 1050 hours of French instruction. The staff of the Ottawa Board have developed a program with an integrated thematic approach, emphasizing communication skills. The greatest emphasis throughout is on listening and speaking, but reading is introduced at the grade 3 level and there is a gradual increase in the amount of writing done, especially in grades 6 through 8.

The core program of the Carleton Board of Education has also had an increase in the time spent in French instruction, but the pattern was different and the total amount of time about 705 hours over the eight-year period. From kindergarten to grade 5 French was taught for 15 to

20 minutes daily, while grades 6 to 8 received 40 minutes of instruction every day. The program in this board also emphasized oral communication, with particular emphasis in the early grades on pronunciation skills. New programs have been developed for the first three grades and work is under way on the continuation of this project through the rest of the elementary grades.

Another approach was used in selected schools of the Carleton Board of Education for several years. From 1973 to about 1976 in certain schools French was used as the medium of instruction at various grade levels in social studies, mathematics, science and other subjects, depending on availability of staff. In 1977 a new extended French program was introduced in 14 schools; this program, called CEL for the planned Core-Extended-Late Immersion sequence, included in the extended phase (grades 4 to 6) environmental studies taught in French, together with daily instruction in the French language. Students in the CEL program would have received 765 hours of instruction by the end of grade 6, or almost the same total amount of time as those in the Ottawa core program. Unfortunately, administrative difficulties made it impossible to continue the CEL groups beyond grade 5. A few students in the earlier extended French program did continue in that program for three years, but the numbers were too small to make it possible to generalize about their achievement. A group of CEL students and a comparison group in the regular program at the same schools were tested at the grade 4 and 5 levels in the two years that the program operated and again at the grade 6 level the third year, although the discontinuation of the program had forced these students to return to the core program.

Each year since 1973 core French students at the same grade level in Ottawa and Carleton have been tested; those in Ottawa represented the leading edge of the 40-minute program described above, and from grade 6 to grade 8 the Carleton students were also following a program with increased time.

In addition to testing and comparing samples from each of these two groups since 1973, tracing of many of these students has been done each year. All those who entered a kindergarten French immersion program in 1971 and those in core French in the same schools have been traced as long as they remained in schools of the Ottawa and Carleton Boards of Education.

Other core French groups have been tested at certain times, mainly to try to replicate results. In the spring of 1976 the leading edge of the Ottawa program was at the grade 4 level. It was felt that it would be desirable to test at the grade 2 level in that year, to attempt to determine whether results might differ from those of two years earlier, due either to a Hawthorne effect stimulating unusual enthusiasm in the first year of the program, or, on the other hand, to the greater effectiveness of the program once it had been in use for several years. In the spring of 1979 another replicative study was done, examining the French proficiency of a grade 4 core group in Ottawa. These core students were tested in order to compare the results of their program in its maintenance phase with the results obtained in 1976 for the leading edge of this program. This grade 4 group, which had entered kindergarten in 1974, had also been traced since that time, along with those who entered French immersion at the same level.

A sample of core students in grades 6 and 7 was tested in the spring of 1980 in order to make comparisons with the data obtained from

the students tested in these grades in the previous two years in Ottawa and Carleton and from the leading edge at the grade 8 level.

This chapter will deal with the testing results of the spring 1980 grade 8 core French samples in both boards. The Ottawa group represents the leading edge of the Ottawa 40-minute program and the Carleton sample the comparable group at the same level. Chapter Three will present results of a longitudinal nature, as well as results of several replicative studies, and also of a cross-sectional study of core programs in grades 6, 7 and 8 in 1980. All measures used will, however, be described in this chapter.

Table 2.1 shows the daily and yearly time allocations for the core programs of the Carleton and Ottawa Board of Education '20-minute' and '40-minute' programs respectively, as well as that for the core and extended French components of the Carleton CEL program. The figures

TABLE 2.1

MINUTES PER DAY AND CUMULATIVE HOURS: CORE FRENCH AND CEL

Grade Level	Ottawa Core		Carleton Core		Carleton CEL	
	Minutes per day	Cum. hours	Minutes per day	Cum. hours	Minutes per day	Cum. hours
K	30	90	15	45	15	45
1	40	210	20	105	20	105
2	40	330	20	165	20	165
3	40	450	20	225	20	225
4	40	570	20	285	60	405
5	40	690	20	345	60	585
6	40	810	40	465	40 (60)	705 (765)
7	40	930	40	585		
8	40	1050	40	705		

shown for CEL at grade 6 are actual times, while those in brackets show the potential times if the program had continued as intended at that level. Despite the variety of programs in the two boards, it is difficult to find groups of students of the same age who have received a nearly equivalent total amount of instruction in French.

Instruments Used, 1973 to 1980

Since the inception of the FRENCH Project in 1973, the primary focus of the examination of core French students has been the measurement of listening comprehension. Tests were usually selected to measure general French proficiency, rather than the degree of mastery of the specific curriculum of either board. In some years it was also possible to administer a French speaking test to a subgroup of the core French sample. However, the measurement of French reading and writing skills was not generally attempted with core French students, although in a few cases a reading test was used with students in an extended French or core program. Moreover, a general scholastic aptitude measure was used with core students in the later years in order to ascertain whether the groups studied were of comparable ability. These different types of measures are described in greater detail in the following sections.

Listening comprehension. Three main tests of French listening comprehension have been used, one for grades 1 and 2, one for grades 3 to 5, and one for grades 6 to 8. Two versions of the second of these were given, since it underwent revision during the second year of the FRENCH Project. All of the tests were presented by means of a tape recording.

For the first two grades, the OISE French Comprehension Test: Kindergarten Level was employed to measure listening comprehension.

This 65-item test, referred to as OISE K, was developed at the Ontario Institute for Studies in Education and was originally intended for use with French immersion students at the kindergarten level. The test consists of four sections administered in two sessions: vocabulary, statements, questions and stories. In the first three sections, students are required to select from four alternatives and then circle the picture which illustrates the word or sentence or answers the question presented in French. In the final section students are read three short stories in French, each being followed by several questions to be answered in the same manner. This test was used with a 50 per cent sample of grade 1 and 2 students in Ottawa and Carleton in the fall of 1973 and the spring of 1974, and with another sample of Ottawa grade 2 students in the spring of 1976.

The second test, OISE French Comprehension Test: Grade 1 Level (OISE 1) was similar in format and number of items to that described above, only intended for grade 1 immersion pupils. By the spring of 1975, a revised form of this test was available, consisting of only 45 items but with essentially the same format and answering mode. During 1977, this test was modified by Research Centre staff in order to make it more suitable for use at the junior level. Item content and alternatives remained unchanged, but items were identified by number instead of a picture and a separate answer sheet was provided to facilitate scoring. In its original 65-item format, this test was used with a 50 per cent sample of students in grade 3, 4 and 5 in both boards in fall 1973 and spring 1974, and in its first revised form with grade 3 in the spring of 1975 and grade 4 in the spring of 1976. The separate answer sheet version was used with a grade 5 core sample in spring 1977, with a further grade 4 sample in spring 1979, and with Carleton Board

CEL and comparison students tested in spring 1978 and 1979 at the grade 4 and 5 levels, respectively.

The third test, used with grades 6 to 8 core students between 1973 and 1980, was the IEA Population II French Listening Comprehension Test. Devised by the International Association for the Evaluation of Educational Achievement under the direction of J.B. Carroll, the tests at this level were designed for use with students in various countries who were about 14 years old and who had had two or three years of basic French courses. The level of difficulty was originally judged appropriate for core students in Ottawa and Carleton by the consultants responsible for these programs. The test consists of 40 multiple-choice items in which the student is required to select the correct picture or written phrase as found in his test booklet and to record his choice on a separate answer sheet.

In 1980 it was also possible to use a listening comprehension test which had been developed by staff of the Research Centre and was based on the Ottawa Board core French curriculum from kindergarten to grade 6. This test, called the OBE French Comprehension Test, was administered to all Ottawa grade 6 students during May 1980; the first two parts of this test were given to grade 7 and 8 students in Ottawa by the FRENCH Project. These two parts consist of 40 verbs and 47 nouns, respectively, presented in context to the student; respondents select from four alternatives the picture which represents the given action or object and record their choice on a separate answer sheet. The third and final section of the test, not used by the FRENCH Project, examined abstract words and grammar, sentence type and verb tense. It was decided not to give this test to Carleton students since it was based specifically on the Ottawa curriculum and was still at an early stage of development.

The following chart shows the grade level and board of the samples to which each of the above listening tests was given during the years 1973 to 1980.

TABLE 2.2

GRADE LEVEL AND BOARD OF SAMPLES
TAKING FOUR FRENCH LISTENING COMPREHENSION TESTS FROM 1973 to 1980

Year	Test given			
	OISE K	OISE 1	IEA II	OBE FCT
1973-74	Gr 1 core OBE	Gr 3 core OBE	Gr 6 core OBE	
	Gr 1 core CBE	Gr 3 core CBE	Gr 6 core CBE	
	Gr 2 core OBE	Gr 4 core OBE	Gr 7 core OBE	
	Gr 2 core CBE	Gr 4 core CBE	Gr 7 core CBE	
		Gr 5 core OBE	Gr 8 core OBE	
		Gr 5 core CBE	Gr 8 core CBE	
1974-75		†Gr 3 core OBE*	Gr 8 core OBE	
		†Gr 3 core CBE*	Gr 8 core CBE	
1975-76	Gr 2 core OBE	Gr 4 core OBE*		
		Gr 4 core CBE*		
1976-77		†Gr 5 core OBE*		
		†Gr 5 core CBE*		
1977-78		Gr 4 CEL CBE*	Gr 6 core OBE	
			Gr 6 core CBE	
			Gr 8 core OBE	
			Gr 8 core CBE	
1978-79		Gr 5 CEL CBE*	Gr 7 core OBE	
		Gr 4 core OBE*	Gr 7 core CBE	
1979-80			Gr 6 core OBE	Gr 6 core OBE
			Gr 6 core CBE	
			Gr 7 core OBE	Gr 7 core OBE
			Gr 7 core CBE	
			†Gr 8 core OBE	Gr 8 core OBE
			†Gr 8 core CBE	

* Revised form (45 items) given
† Speaking test also given to subsample

Speaking tests. The first attempt to measure French speaking proficiency took place in 1974-75, when a sample of grade 3 core French students in Ottawa and Carleton took the IEA Population I French Speaking Test. This test was also given to a sample of grade 5 core students in both boards in the spring of 1977. This is another test developed by the International Association for the Evaluation of Educational Achievement. Population I refers to the fact that it was devised for children of about 10 years of age who have had only one or two years of minimal French language instruction. The test is administered on a one-to-one basis by qualified testers who record the student's responses on tape to be scored and analyzed later. The test contains three sections: pronunciation, structural control and fluency. In the pronunciation section, the student hears a French sentence twice and then is asked to repeat it, while structural control is measured by the responses to a series of ten questions about a set of drawings. In the fluency section the student is asked to describe a picture in as much detail as he can.

In the spring of 1979 a three-part speaking test, suitable for measuring the oral proficiency of grade 7 core students, was assembled for administration on a one-to-one basis similar to the method used with the IEA test above. The first section consisted of the Vocabulary section of the Pimsleur Speaking Test, Form C, in which the student is to identify each of 27 pictures. In the second section of the speaking test used in 1979 the student is asked to respond in complete French sentences to ten questions; these questions had been composed during 1970-71 and revised the following year by staff of the Cultural Centre for Intensive French (CCIF) of the Ottawa Board of Education for use with grade 8 students who spent two weeks at this school. The third

section of the test was the structural control section of the IEA French Speaking Test, Population II, IV and IVS. In this section, as in the corresponding part of the Population I level described earlier, the pupil is asked to respond to a number of questions which refer to simple drawings.

For the 1980 testing of a sample of grade 8 core students, two parts of the previous year's test were used (Pimsleur Vocabulary and CCIF questions). To these were added three sections from the speaking test devised for Ottawa grade 6 core students as a companion to the OBE listening test already described. In the first of these sections, which became Part 3 of the speaking test constructed, the student was asked to identify, with the correct article, a number of familiar classroom objects, such as ruler, box, envelopes or glue, and eight questions were then asked about these objects. In Part 4 of the speaking test, students were presented with six statements in French and, for each one, were asked to give a question to which the statement would be an answer. In the final subtest, students were shown a picture and were asked to describe what is going on in as much detail as they can.

Aptitude. During the first four years of the FRENCH Project, no attempt was made to measure the general scholastic aptitude of the core French samples tested. However, during 1978 and 1979, an ability measure was used with the Carleton CEL students and, in 1979 and 1980, with all core students tested.

In 1978 CEL and comparison students were given the Henmon-Nelson Test of Mental Ability, Level 3-6, and the same measure was used as a make-up test with these groups where necessary in the following year. The Level 6-9 form in the same test series was administered to students in the grade 7 core samples in 1979 and the grade 6 and 7 samples in

1980, the grade 8 sample of that year having earlier results on this test. The Henmon-Nelson tests are widely used measures of general scholastic ability, with a considerable variety of item types, including verbal analogies, vocabulary and general information, as well as number series and figure analogies.

At the grade 4 level in 1979, the ability measures used as covariates were the verbal and nonverbal subtests of the Canadian Cognitive Abilities Test, Level B, already administered in many Ottawa schools. The verbal subtests consist of verbal completion, vocabulary and analogy items organized in separate sections, while the nonverbal subtests include figure analogies, figure classification and matching of two-dimensional shapes.

RESULTS: GRADE 8, SPRING 1980

For several years the contract for the FRENCH Project has included the testing of students in the leading edge of the new French program in Ottawa and in the core program in Carleton. In order to be able to make comparisons with groups tested earlier in grades 6 and 7, the IEA II Listening Comprehension Test was used again with a sample of students in grade 8 in both Ottawa and Carleton. In addition, a locally developed test based on the Ottawa curriculum was given to grade 8 students in Ottawa, in order to make comparisons with the results for samples of students at the grade 6 and grade 7 level tested in 1980. The grade 8 results are reported in this section and the cross-sectional and longitudinal results will be given in the next chapter.

Since most of the core French groups tested in 1980 had reached the end of their elementary school education, emphasis was placed on testing speaking proficiency as well as listening comprehension. The

five-part speaking test described earlier was given to a random subsample representing about 20 per cent of the group which took the listening comprehension test.

Testing of grade 8 students in the spring of 1980 took place in the same schools as were selected in the previous year for testing grade 7. Schools were chosen at that time to represent a variety of regions and types of schools; in 1980, five schools in the Ottawa sample and three in Carleton included immersion classes as well as core French at the grade 8 level. At some of the schools in the sample it was not possible to test all the grade 8 classes in 1980, since some were part of another study. The 1980 sample consisted of about 300 Ottawa students from 10 classes in five schools, including two groups in enriched programs. The Carleton sample consisted of students from 18 different classes in six schools. Since many of the students in this sample had been traced since the start of their schooling, it was generally possible to identify any transfers into the core program from a French immersion or extended French program in the area and to remove them from the analysis.

Listening Comprehension and Ability

The results of testing students in both boards are presented in Table 2.3. As can be noted from this table, mean scores for the Ottawa group were significantly higher than those for Carleton on both the IEA II Listening and Henmon-Nelson tests. An analysis of covariance corrected the listening comprehension scores for differences in ability between groups. The results of this covariance analysis, shown in Table 2.4, indicate that the group differences on the listening test did not reflect differences in student ability, since the adjusted mean score for Ottawa was still significantly higher than that for Carleton.

Comparisons with results from earlier grades are reported in the next chapter. Item analyses for the grade 8 groups as well as those in lower grades will also be provided.

TABLE 2.3

FRENCH PROFICIENCY AND ABILITY TEST SCORES:
GRADE 8 CORE, OTTAWA AND CARLETON, 1980

Test	705 hours French (Carleton)			1050 hours French (Ottawa)		
	Mean	SD	N	Mean	SD	N
IEA II French Listening	18.3	6.0	479	20.8*	7.5	262
OBE French Comprehension Test				59.9	11.1	186
Henmon-Nelson	55.5	12.6	305	59.6*	14.4	222

* Mean is significantly greater than that for the other group ($p < 0.001$)

TABLE 2.4

IEA II LISTENING COMPREHENSION SCORES ADJUSTED FOR DIFFERENCES IN ABILITY,
GRADE 8 CORE, OTTAWA AND CARLETON, 1980

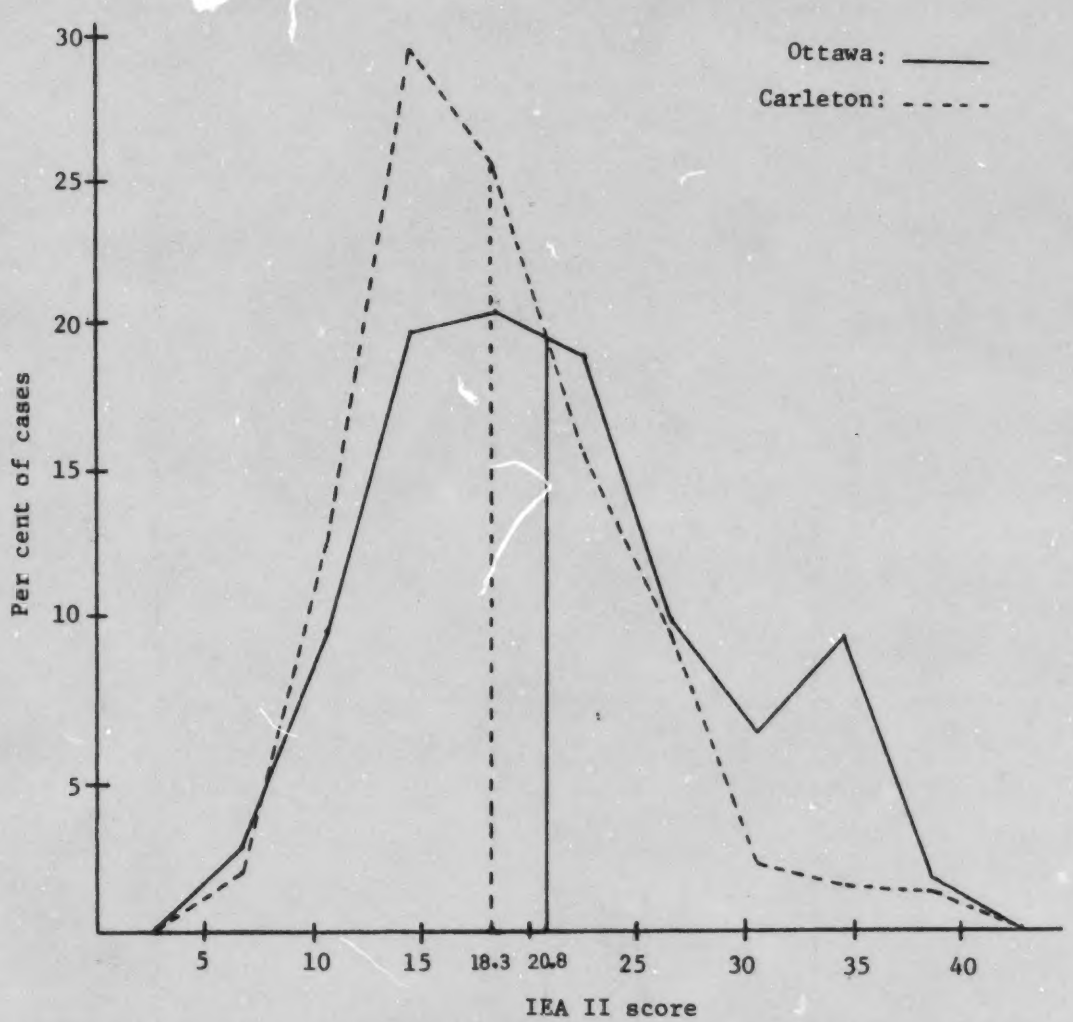
Group	Number of students	Unadjusted mean	Adjusted mean
Carleton (705 hours French)	305	18.3	18.1
Ottawa (1050 hours French)	222	20.8*	20.6*

* Mean is significantly greater than that for the other group ($p < 0.001$)

Figure 2.1 shows the distribution of IEA II listening comprehension scores for the grade 8 students tested in Ottawa and Carleton. Over half of the students with scores of 30 or more in the Ottawa Board came from two enriched classes; however, it will be recalled that the significant difference between the mean scores of the two boards remained after adjustment for scholastic aptitude.

FIGURE 2.1

DISTRIBUTION OF LISTENING COMPREHENSION SCORES,
OTTAWA AND CARLETON, GRADE 8 CORE, 1980



French Speaking Test

In the spring of 1980, a five-part French speaking test was given to a sample of grade 8 core students from both Ottawa and Carleton Boards. These students represented a 20 per cent sample of those taking the listening comprehension test: 57 in Ottawa and 82 in Carleton took all five parts of the test. As shown in Table 2.5, the Ottawa group had a higher mean score (difference significant at the 0.05 level) on the second and fourth parts of the test, in which students were asked to respond to questions in French and to turn statements into interrogative form, respectively. However, little difference between boards was found on the vocabulary sections or in the responses to questions about classroom objects displayed during the test. Item analyses for the parts of this test and a comparison with grade 7 results will be presented in the next chapter.

TABLE 2.5

FRENCH SPEAKING TEST RESULTS, GRADE 8 CORE,
OTTAWA AND CARLETON, SPRING 1980

Part	705 hours French (Carleton)			1050 hours French (Ottawa)		
	Mean	SD	N	Mean	SD	N
Part I Vocabulary (max. = 27)	15.8	5.7	90	16.5	5.2	57
Part 2 CCIF Questions (max. = 30)	12.8	6.9	83	15.5*	6.6	57
Part 3 Classroom Objects (max. = 42)	23.7	8.7	83	24.9	8.6	57
Part 4 Interrogatives (max. = 24)	7.0	5.6	82	9.4*	6.0	57
Part 5 Picture (max. = 18)	9.5	4.6	82	10.9	4.1	57
Total score (max. = 141)	68.4	28.0	82	77.2	27.4	57

* Mean is significantly greater than that for the other group ($p < 0.05$)

For a slightly smaller group from each board, IEA II listening scores were available and thus the total score on the speaking test was included in the computer analysis of grade 8 scores. Table 2.6 shows total test means for these subsamples together with means which have been adjusted for ability. This adjustment reduces somewhat the difference between boards, but does not alter the conclusion that the Ottawa students performed slightly but not significantly better than those in Carleton on the test as a whole.

TABLE 2.6

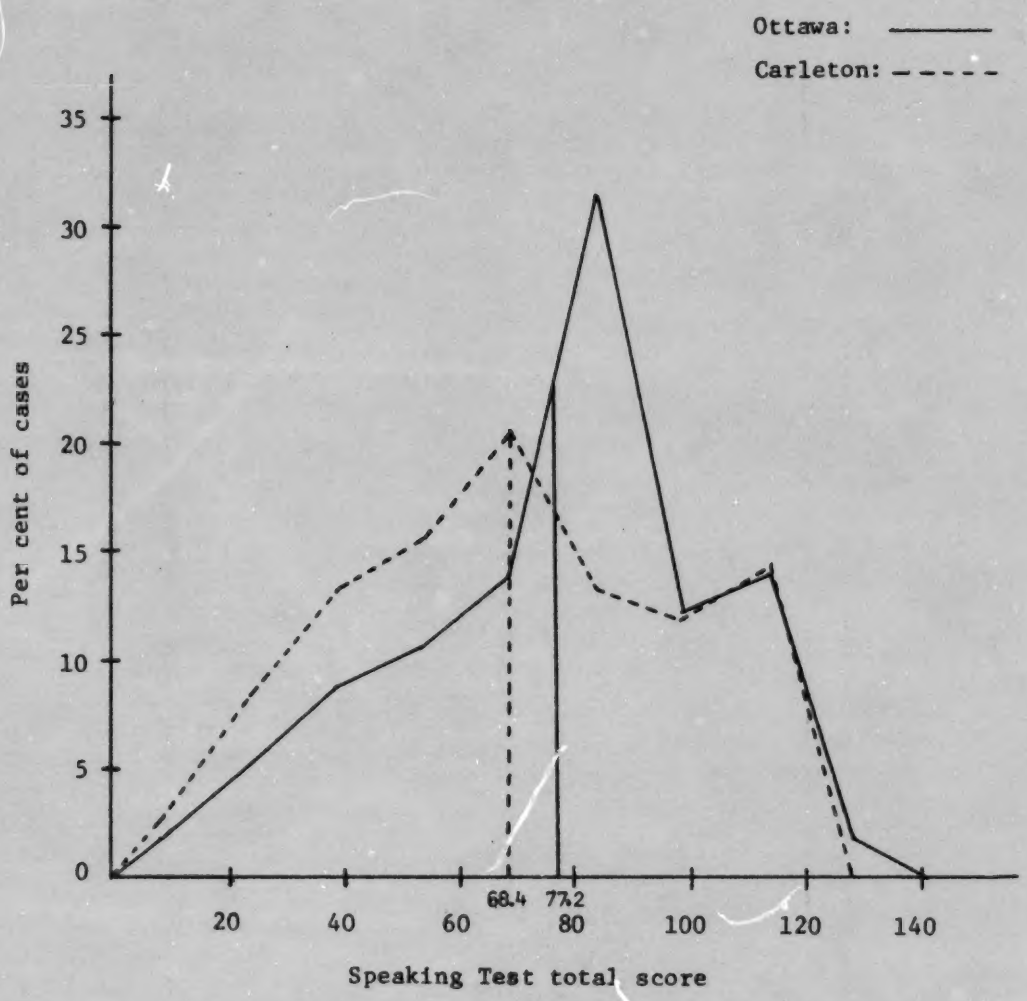
ADJUSTED FRENCH SPEAKING TEST RESULTS,
GRADE 8 CORE, OTTAWA AND CARLETON, SPRING 1980

Group	Number of students	Unadjusted mean	Adjusted mean
Carleton (705 hours French)	77	69.3	71.1
Ottawa (1050 hours French)	53	76.4	73.3

Figure 2.2 shows the distribution of total scores on the test of speaking proficiency used with two groups of grade 8 students in 1980. Although the distributions for Ottawa and Carleton students appear to be somewhat different, the difference in means does not reach significance. The maximum possible score on the five-part test was 141, but the standard deviations shown in Table 2.5 indicate that Part 3 has the highest effective weight in the total score. In Part 5 the score was based on a single rating, which ranged from 0 to 6, and this was multiplied by 3 in order to increase the weight of this subtest. However, the standard deviation was still relatively low and the reliability of this subtest is also likely to be low. The reliability of the other subtests and of the total score would be expected to be acceptable, but data are not presently available to support this conclusion.

FIGURE 2.2

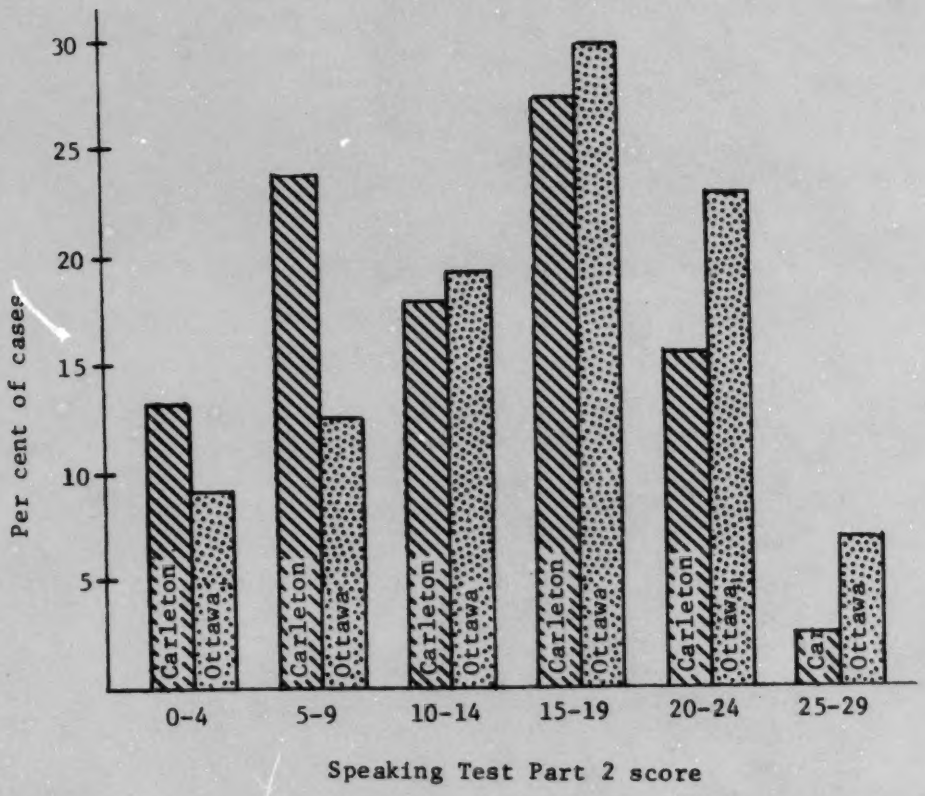
DISTRIBUTION OF FRENCH SPEAKING TEST SCORES,
OTTAWA AND CARLETON, GRADE 8 CORE, 1980



For the two subtests on which there were significant differences between the Ottawa and Carleton groups tested, distributions are shown graphically in Figures 2.3 and 2.4. Part 2 consisted of ten questions which were rated on a scale from 0 to 3 in order to make the scores comparable with those obtained on previous occasions. However, the testers felt that the five-point scale (0 to 4) used in Parts 3 and 4

FIGURE 2.3

DISTRIBUTION OF FRENCH SPEAKING TEST PART 2 SCORES,
OTTAWA AND CARLETON, GRADE 8 CORE, 1980

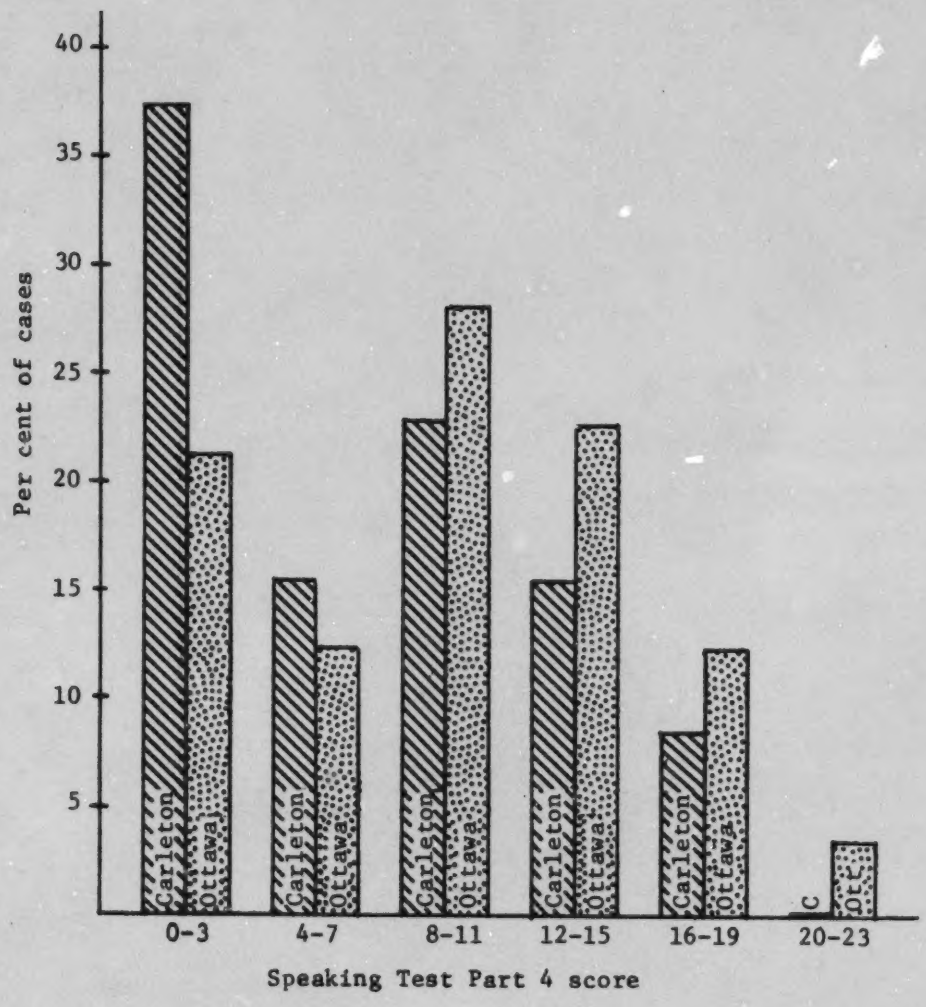


was more satisfactory. Figure 2.3 shows that for both groups Part 2 of the test appears to be at a reasonable level of difficulty, although it is significantly more difficult for the Carleton group.

Significant differences between Carleton and Ottawa students were also found in Part 4 of the speaking test. In this section, students were asked to phrase a question to which a given statement was the answer. Each response was rated on a scale from 0 to 4, giving a maximum possible score of 24 for this part. It will be noted that this test was too difficult for a large proportion of the students tested.

FIGURE 2.4

DISTRIBUTION OF FRENCH SPEAKING TEST PART 4 SCORES,
OTTAWA AND CARLETON, GRADE 8 CORE, 1980



The proportion of zero scores was over 20 per cent in Ottawa and about 32 per cent in Carleton, and another 10 and 15 per cent, respectively, had scores of 5 or less on this test. Additional details concerning Parts 3, 4 and 5 of this speaking test will be found in Research Report 80-05 of the Ottawa Board (Wightman, 1980), which describes the development of the test used with grade 6 students of this board in the spring of 1980.

Details concerning the performance of grade 8 students on individual items of both the listening comprehension and speaking tests will be found in the next chapter of this report, which compares results obtained at different grade levels, from grade 6 through grade 8.

SUMMARY

This chapter has examined the results of French listening and French speaking tests of two groups of core French program students. These Ottawa and Carleton groups had accumulated either 1050 or 705 hours of French instruction respectively, with both groups receiving 40 minutes daily in grades 6 through 8.

Even when results on the listening comprehension scores were corrected for differences in ability, the Ottawa mean score was still significantly greater than that of the Carleton group. Similar differences had been found in previous years.

When the two groups were tested for French speaking proficiency, it was found that they differed little on the vocabulary sections or on responses to questions about familiar classroom objects. However, the Ottawa group did have a significantly higher mean score on the sections requiring responses to questions in French and the conversion of statements into interrogative form. On the total score the Ottawa students performed somewhat, but not significantly, better than the Carleton students.

The following chapter will include an examination of item analysis results of the tests, as well as cross-sectional and longitudinal results of the core French program samples in both boards.

Chapter Three

CORE FRENCH PROFICIENCY, GRADES 3-8, 1973-1980

INTRODUCTION

It has already been pointed out that several listening comprehension tests have been given to core students during the seven years that the FRENCH Project has been supported by a contract with the Ministry of Education of Ontario. Each of these tests has been given at two or three succeeding grade levels. Table 2.2 on page 11 summarizes the grade levels and tests used with various groups in succeeding years. In addition, speaking tests have been administered in grades 7 and 8 in 1979 and 1980, and also at the grade 3 and 5 levels in earlier years. All of the tests used have been described in further detail in the previous chapter.

The first part of this chapter of the report will present the data obtained in grades 3 through 8 from four listening comprehension tests which were described in Chapter Two. In the present chapter results for grades 6 to 8 will be given first, followed by data obtained at earlier grade levels. Listening comprehension results are available for the IEA II test in grades 6 to 8 and for OISE 1 and OISE K in earlier grades. Details concerning the actual samples will be given in the sections containing results of specific tests.

Later parts of this chapter will summarize results given on the speaking tests which have been given, mainly at the grade 7 and grade 8 level. The sex differences found and interrelationships among the various tests used with core students in the Ottawa and Carleton Boards will also be described.

RESULTS: IEA II LISTENING COMPREHENSION

Grades 6-8 Core, Ottawa and Carleton, 1978-1980

Results obtained from the administration of the IEA II French Listening Comprehension Test in successive years are available for grades 6 to 8 of the leading edge of the 40-minute core program in Ottawa and the corresponding 20 to 40-minute program in Carleton. The grade 8 samples chosen from these groups in the spring of 1980 were described in the previous chapter and were taken from the same schools used in the spring of 1979. In the sample schools, most of the classes containing only students at the selected grade level were tested; students at the same grade level in some split-grade classes were also included. In each year one or two enriched classes were part of the Ottawa sample. The total number tested in grades 7 and 8 consisted of about 450 students in 1979 and 250 in 1980 from five Ottawa schools and about 500 each year from six Carleton Board schools. The samples used when the groups were in grade 6 were different from those used at the grade 7 or 8 level, since many pupils move from smaller schools to attend one of the larger middle or intermediate schools between grade 6 and grade 7. In 1978, 200 grade 6 students from nine Ottawa schools and 550 students from ten Carleton schools were tested. In all samples, the scores of students known to have recently entered the program were excluded from the analyses.

The listening comprehension results obtained in 1980 for samples of grade 8 students in the core program in Ottawa and Carleton were presented in the preceding chapter of this report. A similar sample of core students was tested in grade 6 in 1978 and in grade 7 in 1979; these results were presented previously in the annual reports of the FRENCH Project for those years. It has already been pointed out that

the sample for grade 6 came from different schools. It is therefore not possible to make any meaningful comparisons between results obtained for the complete samples for grade 6 and grade 7 in either board. Table 2.3 in the previous chapter showed that the two grade 8 groups differed significantly in scholastic aptitude; however, the significant differences in French proficiency between boards remained at the grade 8 level after correction for differences in ability. Table 3.1 provides a record of the unadjusted means obtained over a three-year period, but the cautions mentioned above must be kept in mind when attempting to interpret these results. Although this table appears to show that there was no change in scores from grade 6 to grade 7 in both boards, there is evidence which suggests that this finding was a result of the lack of comparability of the samples in each case.

TABLE 3.1

IEA II FRENCH LISTENING COMPREHENSION, GRADES 6-8 CORE FRENCH, OTTAWA AND CARLETON, 1978-1980

Grade	Year	Ottawa				Carleton			
		Cum. hrs. of French	Mean*	SD	N	Cum. hrs. of French	Mean	SD	N
6†	1978	810	17.1	5.7	216	465	15.7	4.9	559
7	1979	930	17.1	6.8	447	585	15.7	5.3	559
8	1980	1050	20.8	7.5	262	705	18.3	6.0	479

† Grade 6 sample in both boards came from schools differing from those in the grade 7 and grade 8 samples; aptitude data were not available for grade 6.

* Each mean in this column is significantly different from that for the other group ($p < 0.001$).

For several relatively small groups of students tested in grade 6 it is possible to compare scores obtained in successive years. A group of 73 students in Carleton took the IEA II Listening Comprehension Test in 1978, 1979 and 1980. Results for this group are shown in Table 3.2. It will be seen that the scores increased significantly from grade 6 to grade 7, while the increase from grade 7 to grade 8 was not significant. The mean for these students on the Henmon-Nelson ability test administered in 1979 was 59.0, compared to the mean of 55.5 for the total Carleton sample (see Table 2.3).

TABLE 3.2

IEA II FRENCH LISTENING COMPREHENSION, LONGITUDINAL RESULTS FOR CARLETON STUDENTS, GRADES 6-8, 1978-1980

Grade	Year	Cum. hrs. of French	Listening Comprehension		
			Mean	SD	N
6	1978	465	15.1	4.8	73
7	1979	585	17.4	5.0	73
8	1980	705	18.9	5.5	73

Similar results were obtained in 1979 for those 123 Carleton students who took the IEA II listening comprehension test in grades 6 and 7. This group included the 73 whose scores are reported above; the mean score was 15.2 in grade 6 and 17.3 in grade 7. A group of 57 students in Ottawa (including 26 in an enriched class) also took this test in three successive years; their scores also increased significantly each year (from 17.4 to 22.4 to 26.4). However, because of the unrepresentative nature of this subsample, it is not appropriate to compare the mean scores of these students with more representative samples in either board.

Grades 6-8 Core, Ottawa and Carleton, 1980

Although a good deal of data had been collected from samples of the leading edge of the 40-minute Ottawa program and the corresponding Carleton program by the spring of 1980, it has been seen that when these results were examined carefully, a number of questions about the representativeness of certain groups made conclusions difficult. It was therefore appropriate that the 1980 contract had included, in addition to the testing of the grade 8 core French groups, the collection of data from the core French classes in grades 6 and 7 in order to supplement the longitudinal data obtained over the previous several years. It was also possible to include an aptitude test in the cross-sectional study of the three grades, so that the representativeness of the various samples could be assessed more effectively.

The grade 7 sample consisted of students from the same five Ottawa and six Carleton schools that were used for the grade 8 core French testing described earlier. In Ottawa 450 pupils in 16 classes were tested, while in Carleton 17 classes provided a group of about 580 students.

In order to allow comparison between the grade 6 groups tested in different years, it was decided to use the same sample of schools as that examined in the spring of 1978, when the leading edge was in grade 6. Because of the organization of schools in both boards, it was not possible in either case to use the same sample of schools as used for grades 7 and 8. It would also have been very difficult to identify comparable groups in the feeder schools.

Approximately 300 grade 6 Ottawa students from 12 classes in nine schools were tested. In the Carleton Board, the sample consisted of about 600 students in 22 classes from eleven schools. Four of the classes also contained a number of former CEL students, whose results are not included here but will be discussed in the next section. A distinction was also made between the groups of regular program students from schools which had offered the CEL program and those which had not. It was thought that these two groups might differ with respect to French proficiency, since the former group consisted of pupils who had decided not to enrol in the CEL program. Since there was in fact no appreciable difference between these two groups, their results have been combined in Table 3.3, which presents the cross-sectional data from spring 1980 for grades 6, 7 and 8 in both boards. It should be noted that Henmon-Nelson scores shown for the grade 7 and 8 groups were obtained in their grade 7 year (in 1979 for grade 8 and in 1980 for grade 7). Scores for the grade 6 group were obtained in 1980 when these students were at the grade 6 level and have been adjusted through percentiles to provide an approximately equivalent score on the grade 7 test. The IEA II means given are for those students who had scores on both the French listening and the Henmon-Nelson tests and have been adjusted for ability using the latter test as covariate. There was very little difference between these and the unadjusted means.

TABLE 3.3

ABILITY AND ADJUSTED FRENCH PROFICIENCY SCORES,
GRADES 6-8 CORE, OTTAWA AND CARLETON, SPRING 1980

Test	Ottawa			Carleton		
	†Gr.6 (N=251)	Gr.7 (N=353)	Gr.8 (N=222)	†Gr.6 (N=540)	Gr.7 (N=497)	Gr.8 (N=305)
IEA II Listening						
Adjusted Mean	16.9*	17.8	20.6*	15.8	17.8	18.1
SD	6.6	6.8	7.5	5.7	6.0	6.0
Henmon-Nelson Aptitude						
Mean	56.0 #	57.2	59.6*	56.5 #	58.6	55.5
SD	14.3	14.8	14.4	14.0	13.2	12.6

† Grade 6 samples in both boards came from schools differing from those in the grade 7 and grade 8 samples

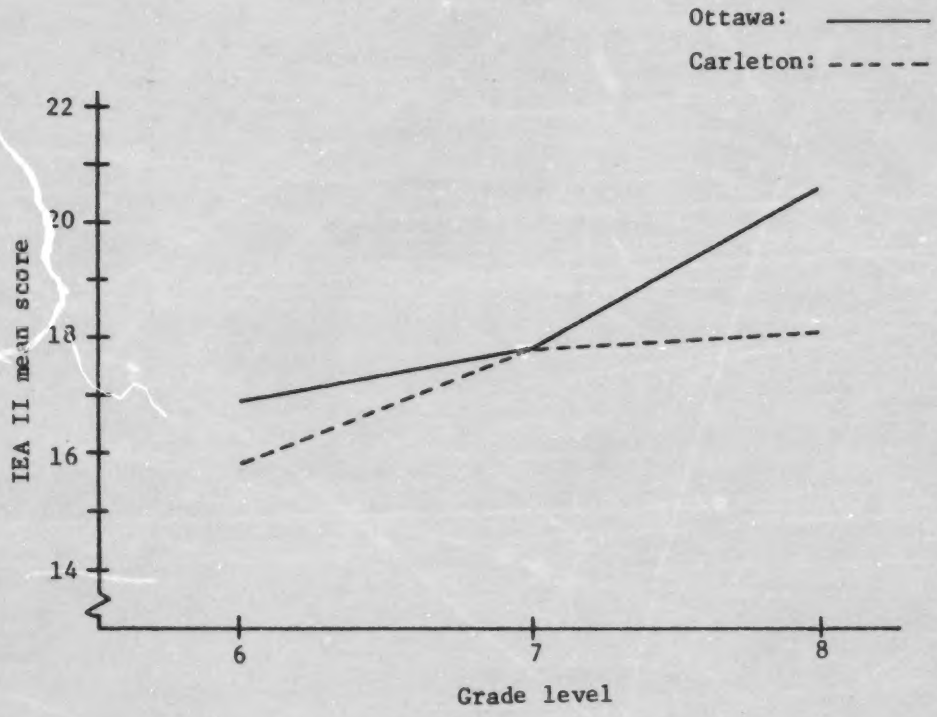
* Each mean is significantly greater than the corresponding one at the same grade level for the other board ($p < 0.001$)

\# Grade 6 mean is an estimated equivalent of the grade 7 scores, which is the level at which the other groups took the test; all means are at about the 75th percentile on publisher's norms

A graphical representation of the adjusted listening comprehension means is shown in Figure 3.1. There was found to be a small increase in group means each year. In the Ottawa group this increase was significant between grade 7 and grade 8 but not between grades 6 and 7, while in the Carleton Board a significant difference was found only between grade 6 and grade 7. In grades 6 and 8 the Ottawa groups performed significantly better than the corresponding group in Carleton, but the grade 7 samples had mean scores that were almost identical.

FIGURE 3.1

CROSS-SECTIONAL RESULTS ADJUSTED FOR ABILITY:
IEA II FRENCH LISTENING COMPREHENSION, GRADES 6, 7 AND 8 CORE FRENCH,
OTTAWA AND CARLETON, SPRING 1980



The only instance of a significant difference between boards with respect to ability as measured by the Henmon-Nelson test occurred in the grade 8 samples, where the Ottawa group scored significantly higher. It should also be noted, however, that the mean ability score for the 1980 grade 7 Carleton group was a significant four points higher than that of the 1979 group at the same level. Although it has been found that at these grade levels the correlations between ability and French listening scores are not high, there may be other factors involved about which we have no information.

In an attempt to make further comparisons between the Carleton grade 7 samples in 1979 and 1980, results for these two years were compiled by school. Table 3.4 shows the Henmon-Nelson and the IEA II results for each of the six schools in which testing was done. It will be observed that in two of the schools and in the total group there was a significant difference in aptitude score between the grade 7 groups tested in the two years ($p < 0.01$ or 0.001). This was also the case for the IEA II listening test, but the same two schools were not involved. In three other cases the difference between test scores for 1979 and 1980 was close to significance ($p < 0.10$), but again there is no consistent pattern. It seems to have been established that correlations between the two tests tend to be low, and this finding is supported by the results given in Table 3.4. However, the two samples may not be equivalent in some related factors, such as motivation and interest or effort, and we do not have any information about differences in instructional patterns in these two years.

Comparisons can also be made between the cross-sectional results obtained in 1980 and the results of the tests given to groups in the leading edge of the core program in grades 6 to 8 during three successive years. The grade 8 results are the same in both comparisons, since testing at this level has occurred only in 1980. The 1978-1980 results are not truly longitudinal, and it has already been pointed out that only a small number of students in each board have been tested in each of the three years. A larger sample, consisting of 216 students in Ottawa and 298 in Carleton, was tested in both grade 7 and grade 8; results for these groups are shown in Table 3.5. The Carleton means are close to those for the total Carleton groups tested in each year, while those for Ottawa are somewhat higher than those for the total Ottawa group, due to the increased weight of the enriched class in this smaller group. Both boards show a significant increase in means between grade 7 and 8.

TABLE 3.4

FRENCH LISTENING AND APTITUDE SCORES BY SCHOOL,
GRADE 7, CARLETON, 1979-1980

Sch.	IEA II Listening						Henmon-Nelson					
	Grade 7 - 1979			Grade 7 - 1980			Grade 7 - 1979			Grade 7 - 1980		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
320	18.1	5.0	103	19.1	5.5	97	57.5	13.0	95	61.2†	12.9	93
473	17.5	6.3	66	17.6	6.2	132	57.5	14.4	66	56.6	14.1	121
300	17.4	5.6	55	18.4	6.1	63	53.2	12.5	54	61.5*	14.4	61
793	14.6	5.0	188	17.1**	5.8	119	56.0	14.0	185	59.0†	11.9	114
311	14.4	5.9	50	16.9†	5.7	33	46.1	13.4	48	57.1**	12.6	33
839	13.7	4.2	97	17.5**	6.3	80	52.7	12.8	91	56.3†	13.2	74
Total	15.7	5.4	559	17.8**	6.0	524	54.7	13.8	539	58.6**	13.3	496

† Difference between 1980 and 1979 means is close to significance ($0.05 < p < 0.10$)

* Mean for 1980 group is significantly greater than that for the corresponding group in 1979 ($p < 0.01$)

** Mean for 1980 group is significantly greater than that for the corresponding group in 1979 ($p < 0.001$)

TABLE 3.5

IEA II FRENCH LISTENING COMPREHENSION, LONGITUDINAL RESULTS
FOR OTTAWA AND CARLETON, GRADES 7-8, 1979-1980

Grade	Year	Ottawa (N = 216)			Carleton (N = 298)		
		Cum. hrs. of French	Mean	SD	Cum. hrs. of French	Mean	SD
7	1979	930	18.3	6.6	585	15.6	5.0
8	1980	1050	21.2*	7.3	705	17.8*	5.4

* Mean for grade 8 is significantly greater than that for grade 7 in the same board ($p < 0.05$)

Grade 6 Former CEL, Carleton, 1980

The existence in 1978 and 1979 of the Carleton CEL program, which gave students enrolled in it an extra 40 minutes per day of instruction in French at the grades 4 and 5 levels, caused the situation in the Carleton grade 6 core sample to be somewhat complex. The grade 6 testing included five classes which were composed all or in part of former CEL students; it was felt essential to examine this group separately. Results discussed in the last section pertained to students who had never been enrolled in the CEL program. Table 3.6 shows results for the group of former Carleton CEL students, including comparisons with the other grade 6 groups tested in the spring of 1980.

TABLE 3.6

FRENCH LISTENING COMPREHENSION RESULTS, CEL AND CORE FRENCH, GRADE 6, OTTAWA AND CARLETON, SPRING 1980

Board and program	Cum. hrs. of French	IEA II Listening			Henmon-Nelson		
		Adj. Mean	SD	N	Mean	SD	N
Carleton core	465	15.8	5.7	540	50.0	14.0	540
Ottawa core	810	16.9	6.6	251	49.1	14.3	251
Carleton former CEL	705	18.8*	5.1	82	55.1*	13.0	82

* Mean for this group is significantly greater than those for the other two groups ($p < 0.05$)

Reference to Table 2.1 will show that the cumulative time in French for the former CEL group equals that of the Carleton grade 8 core French group, which received 20 minutes of French per day until grade 6, when this was doubled to provide 40 minutes per day in grades 6, 7 and 8. It was, however, less than the cumulative time of the Ottawa grade 6 group and closer to that for grade 5 in Ottawa. It will be seen from Table 3.6

that the mean adjusted for ability for the former CEL students is significantly greater than both Ottawa and Carleton grade 6 core means. It is also slightly but not significantly higher than the Carleton grade 8 core mean in the same year. It may also be seen from this table that the ability mean score of the former CEL group was significantly higher than that of the Carleton or Ottawa grade 6 core samples. Results achieved by the CEL and comparison samples in grades 4 and 5 will be presented in a later section.

Item Analysis, Grades 6-8, 1978-1980

In this section data concerning responses to individual items on the IEA II listening test will be presented. In view of the difficulty of finding comparable samples across grade levels or between boards, caution should be exercised in interpreting differences. However, some examples are given below to illustrate the type of information provided by item analysis data. It will be necessary to examine the test itself to determine the content of other items.

In the Sixth Annual Report of the FRENCH Project, 1978 and 1979 results of the IEA II listening test were given for grade 6 and grade 7 core students in Ottawa and Carleton. Table 3.7 of this report gives a complete summary of results for the samples tested in the spring from both boards at each of the three grade levels tested from 1978 to 1980.

Table 3.8 presents similar data for the samples tested at the same three grade levels in the spring of 1980. Results for a grade 6 group of former CEL students who were tested in 1980 are also included; it will be observed that these students have had the same amount of time in French as Carleton grade 8 core students and about 85 per cent as much as those in grade 6 in Ottawa. It should also be remembered that the grade 8 data are identical in Tables 3.7 and 3.8. The patterns

TABLE 3.7

IEA II LISTENING COMPREHENSION: LONGITUDINAL ITEM ANALYSIS DATA, GRADES 6-8, OTTAWA AND CARLETON, 1978-1980

Item no.	Per cent answering correctly					
	CBE gr. 6 (465 hrs.)	CBE gr. 7 (585 hrs.)	CBE gr. 8 (705 hrs.)	OBE gr. 6 (810 hrs.)	OBE gr. 7 (930 hrs.)	OBE gr. 8 (1050 hrs.)
1.	72	74	82	69	61	68
2.	57	56	60	50	56	69*
3.	27	30	42	35	42	63**
4.	89	85	90	86	78	86
5.	45	57	48	39	41	51
6.	55	55	72**	68	68	78
7.	64	56	58	53	54	58
8.	43	48	53	48	47	60
9.	59	45	58	64	52	56
10.	23	24	32	28	34	47*
11.	88	89	91	91	90	93
12.	77	80	84	84	79	87
13.	28	32	45*	42	47	59*
14.	41	33	42	39	38	50
15.	61	58	70	66	60	78*
16.	48	43	59	58	54	71*
17.	32	32	44	50	43	57
18.	47	50	72**	50	55	76**
19.	41	42	58	58	54	74*
20.	15	12	18	13	17	28*
21.	24	23	31	28	28	36
22.	26	32	42	29	34	45
23.	26	34	38	27	36	45*
24.	75	79	78	80	76	82
25.	46	43	52	40	45	53
26.	7	12	8	7	7	7
27.	29	31	28	23	30	32
28.	21	14	18	18	20	17
29.	22	23	28	24	26	32
30.	21	19	22	23	24	32
31.	13	10	13	11	16	22
32.	11	13	13	12	16	27*
33.	60	59	64	74	65	76
34.	33	39	35	42	39	45
35.	19	18	20	21	27	22
36.	24	21	34	28	30	34
37.	24	23	25	23	21	27
38.	25	31	42*	31	28	44
39.	25	30	32	32	31	47
40.	25	29	31	25	30	43*

* Per cent answering correctly for grade 8 is significantly greater than the smaller of those for grade 6 or grade 7 ($p < 0.05$)

** Per cent answering correctly for grade 8 is significantly greater than both those for grades 6 and 7 ($p < 0.05$)

TABLE 3.8

IEA II LISTENING COMPREHENSION: CROSS-SECTIONAL ITEM ANALYSIS DATA, GRADES 6-8, OTTAWA AND CARLETON, SPRING 1980

Item no.	Per cent answering correctly						
	CBE gr.6 (465 hrs.)	CBE gr.7 (585 hrs.)	CBE gr.8 (705 hrs.)	Former CEL (705 hrs.)	OBE gr.6 (810 hrs.)	OBE gr.7 (930 hrs.)	OBE gr.8 (1050 hrs.)
1.	76	78	82	76	66	61	68
2.	54	60	60	62	54	61	69
3.	27	36	42	42	36	43	63**
4.	86	87	90	98**	84	88	86
5.	52	46	48	61	42	43	51
6.	63	66	72	75	68	66	78
7.	55	59	58	57	51	59	58
8.	42	46	53	40	48	47	60
9.	58	54	58	58	57	50	56
10.	25	32	32	38	28	30	47**
11.	88	92	91	93	93	93	93
12.	73	81	84	84	83	81	87
13.	35	42	45	38	36	46	59*
14.	35	42	42	39	40	45	50
15.	64	70	70	83*	62	67	78*
16.	48	56	59	72*	53	59	71*
17.	40	44	44	63	45	49	57
18.	51	68	72*	77*	57	67	76*
19.	39	49	58	72**	56	62	74*
20.	10	15	18	16	15	17	28
21.	27	28	31	29	27	31	36
22.	30	43	42	43	29	37	45
23.	32	37	38	43	32	40	45
24.	76	82	78	93*	79	73	82
25.	47	50	52	51	48	51	53
26.	8	9	8	5	4	10	7
27.	30	33	28	31	37	36	32
28.	16	18	18	13	22	21	17
29.	23	26	28	20	22	22	32
30.	31	24	22	20	28	23	32
31.	13	14	13	12	14	17	22
32.	11	10	13	15	14	15	27
33.	63	64	64	63	70	66	76
34.	36	42	35	41	42	37	45
35.	21	21	20	20	21	24	22
36.	34	32	34	36	35	31	34
37.	22	27	25	32	28	27	27
38.	24	38	42	22	28	34	44
39.	24	35	32	38	29	30	47**
40.	27	35	31	29	35	33	43

* Per cent answering correctly for grade 8 or former CEL is significantly greater that the smaller of those for grade 6 or grade 7 ($p < 0.05$)

** Per cent answering correctly for grade 8 or former CEL is significantly greater than both those for grades 6 and 7 ($p < 0.05$)

of the per cent of correct answers reflect the mean scores shown earlier, since the mean score for a group is equal to the sum of the proportions (in decimal form) answering each item correctly.

In these two tables it is possible to identify items which are consistently easy or difficult, or which show differences between groups. If one takes 75 per cent as a reasonable level to indicate mastery of an item by a group, it will be seen that relatively few items are mastered by any group. In general, items which are as easy as this are done well at each of the grade levels tested (e.g. items 4, 11, 12 and 24). Item 11, for example, which involved the verb *porter* and required knowledge of names of articles of clothing and parts of the body, was particularly well done by all groups. Similarly the very difficult items tend to remain so (items 20, 26, 31, etc.). In item 26, which was particularly difficult, about 70 per cent of the students at each grade level interpreted *un quart d'heure* to mean *four hours.*

The test is not based on the core curriculum in either school board, and although there may be an occasional case of a phrase unfamiliar in this country, the vocabulary and structures are generally basic. The general patterns of the item analyses remained the same over different groups and grade levels.

The only item on which the Carleton groups all did better than the Ottawa groups was item 1, which involved telling time. Most Ottawa students who did not respond correctly evidently thought *et quart* meant *four minutes after.* In item 5 about as many of the pupils chose the picture of the cat <u>on</u> the table as <u>under</u> it for *sous la table,* but in Ottawa there was an increase of about 25 per cent in the proportion of

correct responses from grade 6 to grade 8. The former CEL group in Carleton performed better on this item than any of the other groups, as they did on several other items.

Item 7 was of moderate difficulty but showed little improvement over the years. This item involved the word *moins* and, although over half the students answered correctly, about a quarter of them evidently confused *moins* with *plus*. Even though item 17 showed some improvement between grades 6 and 8, at least a quarter of the students missed the significance of *Qu'est-ce que vous donnez à manger à votre chien?* and believed that the question asked *Qu'est-ce que c'est qu'un chien?* This was another item on which more of the former CEL group were able to respond correctly.

RESULTS: OBE FRENCH COMPREHENSION TEST

Grades 6-8, Ottawa, 1980

This test, developed in Ottawa in 1979-80, was based on the Ottawa core French curriculum. Data from two sections of the test used in April 1980 at the grade 6 level as part of the city-wide testing program in Ottawa were obtained from samples in grades 7 and 8. In making comparisons at the three grade levels, the samples used were essentially the same as those for which the IEA II data were reported earlier. The grade 8 results were also included with the results of other tests given at this grade level in the spring of 1980.

Means for samples from grades 6, 7 and 8 are shown in Table 3.9. The grade 8 mean is significantly greater than that for either of the other grades, while the difference between the means for grade 6 and grade 7 is not significant.

TABLE 3.9

OBE FRENCH COMPREHENSION TEST RESULTS, GRADES 6, 7 AND 8, OTTAWA, 1980

Grade	Mean	SD	N
Grade 6	55.9	12.3	227
Grade 7	56.8	12.4	253
Grade 8	59.9*	11.2	186

* Mean for grade 8 is significantly greater than those for the other grades ($p < 0.01$)

The item analysis data for the two sections of the OBE French Comprehension Test which were used in this study are organized in terms of the grade level at which the vocabulary being tested had been introduced in the Ottawa core French curriculum for K-6. The results for the first subtest, on verbs, are presented in Table 3.10, in which the mean score and the average per cent correct are shown for the group of words introduced at each grade level. These results are also shown graphically in Figure 3.2.

Similar data from the second part of the listening comprehension test, on nouns introduced at various grade levels, are shown in Table 3.11 and Figure 3.3. In the test on verbs, the highest scores were obtained on the section involving verbs introduced in kindergarten and the lowest on the group of verbs presented in grades 1 and 2. Nouns tended to be better known than verbs, and by grade 8 the nouns from grades 5 and 6 tended to be more familiar than those introduced earlier. It should be remembered that the words presented in these tests are only a sample of the total vocabulary introduced at various grade levels and that the samples of students used here are not necessarily comparable.

TABLE 3.10

OBE FRENCH COMPREHENSION TEST: VERBS,
RESULTS FOR GRADES 6-8, OTTAWA, SPRING 1980

Subtest	Results		
	Grade 6	Grade 7	Grade 8
Verbs introduced in kindergarten (12 items)			
Mean score	8.5	8.5	8.7
Mean per cent correct	71	71	73
Verbs introduced in grades 1 and 2 (8 items)			
Mean score	4.5	4.8	5.0
Mean per cent correct	57	59	62
Verbs introduced in grades 3 and 4 (10 items)			
Mean score	6.0	6.3	6.5
Mean per cent correct	60	63	65
Verbs introduced in grades 5 and 6 (10 items)			
Mean score	6.1	6.4	6.4
Mean per cent correct	61	64	64

FIGURE 3.2

OBE FRENCH COMPREHENSION TEST: VERBS,
RESULTS FOR GRADES 6-8, OTTAWA, SPRING 1980

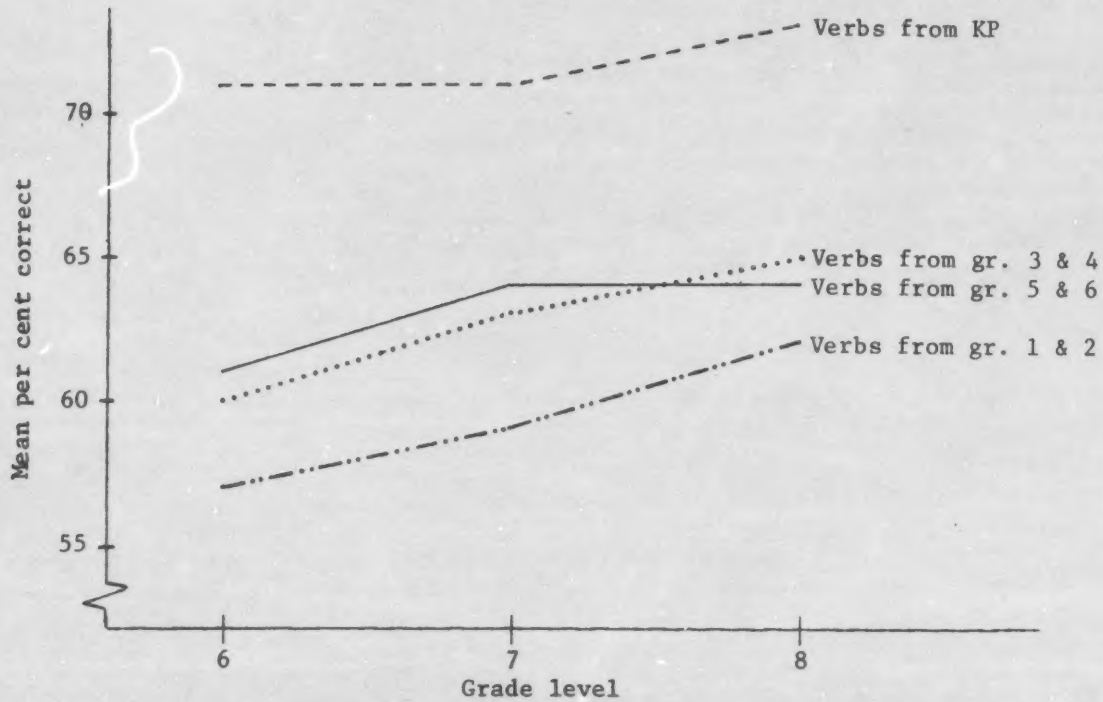


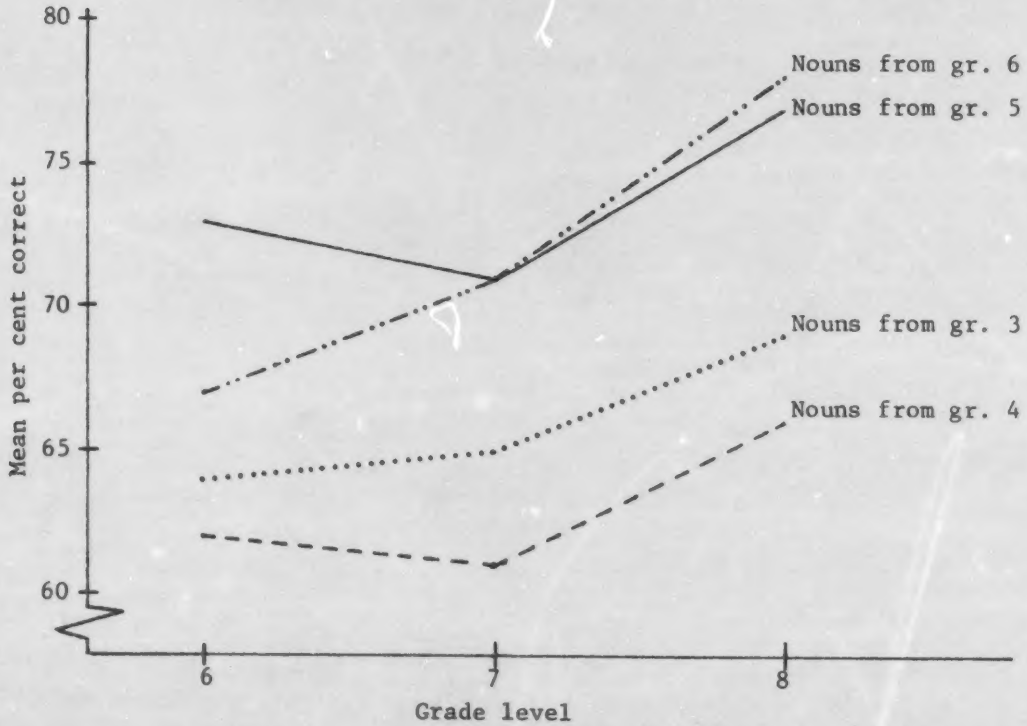
TABLE 3.11

OBE FRENCH COMPREHENSION TEST: NOUNS,
RESULTS FOR GRADES 6-8, OTTAWA, SPRING 1980

Subtest	Results		
	Grade 6	Grade 7	Grade 8
Nouns introduced in grade 3 (15 items)			
Mean score	9.5	9.7	10.3
Mean per cent correct	64	65	69
Nouns introduced in grade 4 (15 items)			
Mean score	9.3	9.1	9.8
Mean per cent correct	62	61	66
Nouns introduced in grade 5 (10 items)			
Mean score	7.3	7.1	7.7
Mean per cent correct	73	71	77
Nouns introduced in grade 6 (7 items)			
Mean score	4.7	5.0	5.4
Mean per cent correct	67	71	78

FIGURE 3.3

OBE FRENCH COMPREHENSION TEST: NOUNS,
RESULTS FOR GRADES 6-8, OTTAWA, SPRING 1980



Of the nouns and verbs which were relatively familiar to these groups of students, some were similar to the equivalent word in English (e.g., *un astronaute, changer*) and others pertained to objects or actions which the students had probably encountered frequently (e.g., *un stylo, regarder*). Of greater difficulty were other words which were probably met less frequently in classroom situations (like *couler* and *de la laine*).

In Table 3.12 the detailed item analysis for one section of the test on verbs is given, to illustrate the information available from these tests. It will be seen that for the verbs introduced in grades 3 and 4 which were included in the test there is a wide range of difficulty. For some, like *changer* and *piquer*, over 80 per cent of students at each grade level answered correctly. *Nettoyer* and *couler*, on the other hand, were consistently difficult; one of the alternative choices for *couler* showed a woman putting water in the refrigerator and this was the most frequently chosen response. In this group of items the ones which showed the greatest increase between grade 6 and grade 8 were items 28 and 30 (*disparaître* and *construire*).

Additional details concerning the content of the OBE French Comprehension Test and the results for the total group of students tested at the grade 6 level in Ottawa will be found in OBE Research Report 80-07 (Wightman, 1980).

TABLE 3.12

ITEM ANALYSIS FOR OBE FRENCH COMPREHENSION TEST:
VERBS INTRODUCED IN GRADES 3 AND 4,
RESULTS FOR GRADES 6-8, OTTAWA, SPRING 1980

Item	Per cent answering correctly		
	Grade 6	Grade 7	Grade 8
21. *La femme fait couler de l'eau.*	27	28	22
22. *Marie change les vêtements de son chat.*	83	85	87
23. *L'abeille pique Jean.*	91	94	95
24. *La maman ours nettoie.*	18	17	24
25. *L'oiseau protège ses petits.*	52	57	58
26. *Michel s'étire.*	53	49	48
27. *Marie et Paul s'embrassent.*	76	80	85
28. *Le magicien fait disparaître le lapin.*	62	75	82
29. *Jean grossit.*	69	71	73
30. *Les hommes construisent un bateau.*	65	70	80

RESULTS: OISE LISTENING COMPREHENSION TESTS

OISE 1, Grades 3-5, 1973-1979

The revised 45-item version of the OISE 1 test was administered to several groups of students between 1975 and 1979. In 1975, 1976 and 1977, this test was used to measure French listening skills of students in grades 3 to 5 in the leading edge of the 40-minute core program in Ottawa and students at the same grade level in the 20-minute program in Carleton. A further Ottawa grade 4 sample was tested in 1979 in an attempt to replicate earlier findings. Other groups with whom the OISE 1 test was used as the listening comprehension measure included grade 4 and 5 students in the Carleton CEL program and their English-program comparisons. Although the CEL program is no longer in existence, it was an attempt to provide a uniform program in a number of schools and results of testing listening comprehension of pupils in the CEL program are included in this report.

Table 3.13 shows the OISE 1 means for the core and CEL groups described above. This table shows clearly a relationship between the amount of time spent in French and scores on the OISE 1 listening comprehension test. However, it is apparent that the 45-item test was too difficult for students in the Carleton core program at the grade 3 and 4 levels, and hence does not provide a reliable measure of what they had actually learned. The 40-minute core groups in Ottawa scored significantly higher than their comparisons in the 20-minute program in Carleton at each grade level and showed a significant gain from grade 3 to grade 4 and from grade 4 to grade 5.

TABLE 3.13

REVISED OISE 1 RESULTS, GRADES 3-5, CORE AND CEL, OTTAWA AND CARLETON, 1975-1979

Grade	Board	Program	Year	Cum. hrs. in French	Mean	SD	N
3	Carleton	core	1975	225	11.0	5.8	478
4	Carleton	core	1976	285	11.3	4.9	406
4	Carleton	core	1978	285	11.2	4.6	82
5	Carleton	core	1977	345	13.5	6.1	450
5	Carleton	core	1979	345	11.8	5.1	97
4	Carleton	CEL	1978	405	16.1	6.9	113
3	Ottawa	core	1975	450	13.5	6.4	213
4	Ottawa	core	1976	570	16.3	7.5	251
4	Ottawa	core	1979	570	17.7	8.3	358
5	Carleton	CEL	1979	585	21.8	7.1	180
5	Ottawa	core	1977	690	19.8	7.4	180

Comparison of the two Ottawa grade 4 core samples shows the 1979 group performing better on the OISE 1 test. In 1979 the grade 4 40-minute core program, which had been newly introduced at this level in 1976, was being used for the third time. Teachers had had two full years to become familiar with it, to learn how to use it, and to develop any needed changes or additional materials for use with students. Increased familiarity with the program could be one explanation for the significantly higher mean for the 1979 grade 4 sample.

Groups of Carleton core program students were tested at the grade 4 and 5 levels in 1978 and 1979 as comparisons for the CEL groups. It should be noted that, since the core samples used in this comparison consisted of students in the same schools offering CEL, they may not be typical of students throughout the board; one would indeed expect that the children with less proficiency and interest in the French language would be the ones who would opt to remain in the 20-minute core program. Moreover, significant differences in ability between the two groups did exist and favoured the CEL group. However, results for the CEL group show a widening gap between them and their core comparisons which, as seen in an earlier section, was maintained at the grade 6 level when all students followed a 40-minute core program.

Before the establishment of the CEL program, the Carleton Board had experimented with various types of extended French programs where the students took one or more subjects, such as mathematics or social studies, in French in addition to the daily 20-minute French period. Several classes of extended French students at the junior level were given the OISE 1 test during the earlier years of the FRENCH Project. However, results are not given here since the program is no longer

available and the curriculum was so varied that conclusions cannot be drawn from the results. The reader is referred to FRENCH Working Papers 23, 50, 57, 66, 72, 74, 103, 104, 105, 106 and 111 for results of this testing.

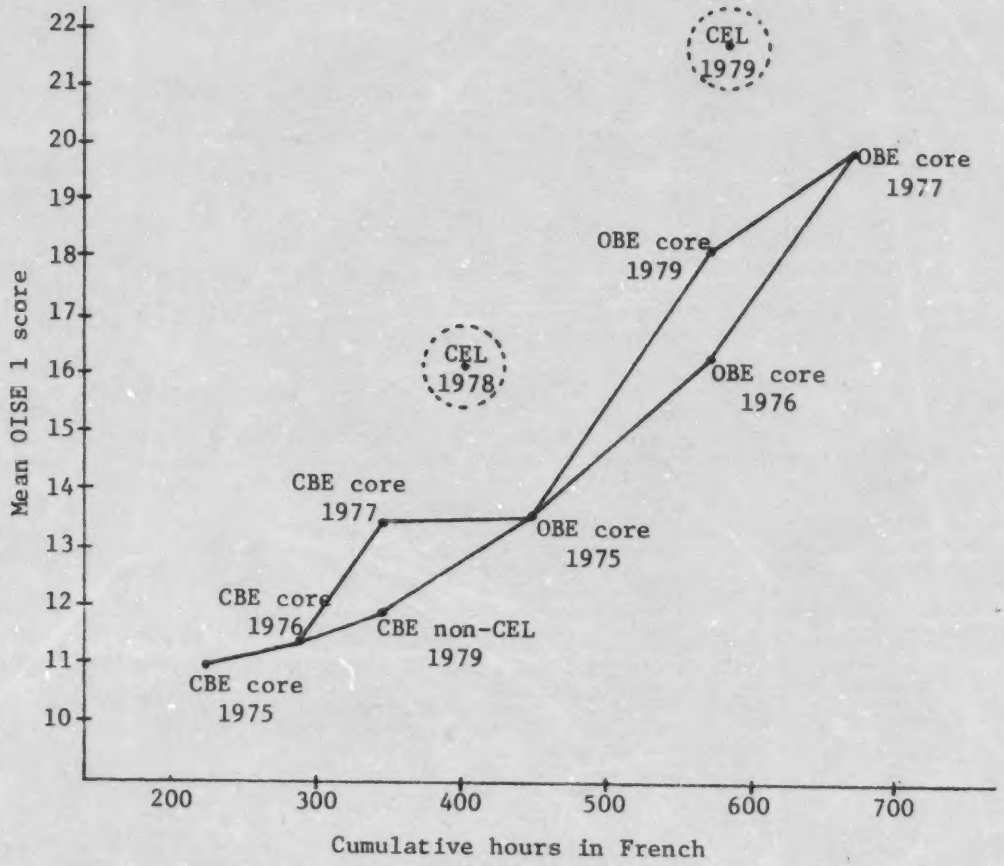
Figure 3.4 shows graphically the relationship, given in Table 3.13, between total instructional time in French and listening comprehension as measured by the OISE 1 test. By the end of grade 5, CEL students had received approximately the same amount of French instruction as 40-minute core students at the end of grade 4. Yet the CEL group performed significantly better than the latter on the listening comprehension test, and better even than grade 5 students in the 40-minute core program who had had almost 20 per cent more total exposure to French.

Many more questions might be asked. Would the relationship found above continue to hold if indeed the functioning of the 40-minute core program is improving, as might be indicated by the higher score for the grade 4 group tested in 1979? Is the superior performance of the CEL students simply the result of the change in distribution of instructional time, with less exposure in the earlier grades and more later, or is it the result of learning other subject matter through the medium of French? Would CEL students show greater achievement in other aspects of French proficiency, namely speaking, reading or writing? Would CEL students maintain their initial advantage? Many of these questions are now impossible to answer since the variety of programs is no longer available for study, the CEL program having been replaced in 1979-80 throughout the Carleton Board by a 40-minute core program at all grade levels. However, as described earlier, an attempt was made during the 1980 testing to compare former CEL students at the grade 6 level with those who

had always been in the core program. Grade 6 means on the IEA II listening test were found to be higher for the group of former CEL students, although all groups had the same 40-minute core program in 1979-80.

FIGURE 3.4

RELATIONSHIP BETWEEN TIME IN FRENCH AND LISTENING COMPREHENSION SCORES, GRADES 3-5 CORE FRENCH AND CEL, OTTAWA AND CARLETON, 1975-1979



The results in Table 3.14 below show mean scores on the 65-item OISE French Comprehension Test: Grade 1 Level given in 1973-74. It will be remembered that all these students followed a 20-minute core program. Scores for the two boards are similar and all groups show a significant gain during the year ($p < 0.001$). Results for grades 3 and 4 in the spring are generally somewhat higher than those for grades 4 and 5, respectively, in the fall. These scores should not be compared with those in Table 3.13, since two versions of the OISE 1 test were involved, one with 45 and one with 65 items.

TABLE 3.14

OISE 1† RESULTS, GRADES 3-5 CORE, OTTAWA AND CARLETON, 1973-74

Grade	Board	Cum. hrs. of French	Fall 1973			Spring 1974		
			Mean	SD	N	Mean	SD	N
Gr. 3	Carleton	225	21.8	7.4	1089	24.8	6.8	1048
	Ottawa	225	22.6	7.2	412	26.4	7.0	430
Gr. 4	Carleton	285	24.6	7.3	1151	29.4	7.9	1144
	Ottawa	285	23.8	6.7	620	27.1	7.3	571
Gr. 5	Carleton	345	26.5	7.1	992	30.5	7.3	901
	Ottawa	345	27.3	7.9	682	29.8	8.1	660

† These results should not be compared with those in Table 3.13, since these results are for the 65-item version of the OISE 1 test and those in Table 3.13 are for the revised 45-item version

It should be pointed out that the much smaller sample size in Ottawa than in Carleton, as shown in this table, does not reflect the relative sizes of the two boards, nor the fraction of the student population tested at each level. Rather, it relates to the fact that many Ottawa pupils in grades 3 to 5 were located in combined-grade classes, while fewer Carleton students were in this category. Results for such classes were presented separately in the original report and are omitted here.

OISE K, Grades 1 and 2, 1973-1976

The OISE French Comprehension Test: Kindergarten Level was given to grade 1 and 2 Ottawa and Carleton students in the fall of 1973 and spring of 1974, and to grade 2 Ottawa students again in the spring of 1976. Carleton students in these groups followed a core French program of 15 minutes per day in kindergarten, followed by 20 minutes per day thereafter, while Ottawa students at each level received exactly twice this amount of daily French instruction. The grade 2 groups in 1973-74 represented the leading edge of the Ottawa 40-minute core program.

Table 3.15 shows means and standard deviations for the samples tested in grades 1 and 2 at the beginning and end of the 1973-74 school year. As in the case of the OISE 1 results discussed earlier, the Ottawa sample appears much smaller than the Carleton sample because of the higher proportion of Ottawa students in combined-grade classes which are not included in these results.

TABLE 3.15

OISE K LISTENING RESULTS, GRADES 1 AND 2, OTTAWA AND CARLETON, 1973-74

Grade	Board	Cum. hrs. of French	Fall 1973			Spring 1974		
			Mean	SD	N	Mean	SD	N
Grade 1	Carleton	105	18.4	7.2	1177	25.6	8.3	1138
	Ottawa	210	21.5	8.2	571	30.3	9.8	416
Grade 2	Carleton	165	24.6	7.5	887	31.3	9.2	884
	Ottawa	330	29.6	9.3	328	39.5	10.2	304

For both boards, the fall grade 2 mean is just slightly lower than the spring grade 1 mean. This is what might be expected, since the relatively small amount of French learning occurring in the interim is

offset by the forgetting which takes place over the summer holidays. In all cases, significant gains have occurred between fall 1973 and spring 1974.

A sample of students in grade 2 in the spring of 1976 was also given the OISE K listening test, in order to compare the results with those obtained at the same grade level two years earlier. It was also possible to show the mean scores of the subsample of seven classes from six schools at which grade 2 classes were tested in both years. These comparisons are presented in Table 3.16. There is no significant difference between the total sample and the subsample in either year. However, the 1974 means are significantly higher than those for the later year. These results differ from those found in the replication of grade 4 testing described in the preceding section. Here the difference is in the opposite direction to that which would be expected as a result of increased familiarity with the program. Another possibility is that the mere fact of participating in a new, experimental program generated enthusiasm and stimulated output of both teachers and students. This possibility, known as the Hawthorne effect, cannot be excluded as one explanation of the grade 2 results.

TABLE 3.16

OISE K LISTENING RESULTS, GRADE 2, OTTAWA, SPRING 1974 AND 1976

Group	Spring 1974			Spring 1976		
	Mean	SD	N	Mean	SD	N
Total group tested	39.5	10.2	304	35.1	8.5	264
Subgroup from schools tested in both 1974 and 1976	38.9	10.9	194	35.1	8.7	179

SPEAKING TEST RESULTS

IEA I French Speaking, Grades 3 and 5, 1975 and 1977

As already described, a sample of about 50 grade 3 students from each of the Ottawa and Carleton Boards was given the IEA I French speaking test in the spring of 1975. The same test was given to samples of grade 5 students in the spring of 1977. These groups represent the leading edge of the 40-minute core program in Ottawa and its comparison in the 20-minute program in Carleton.

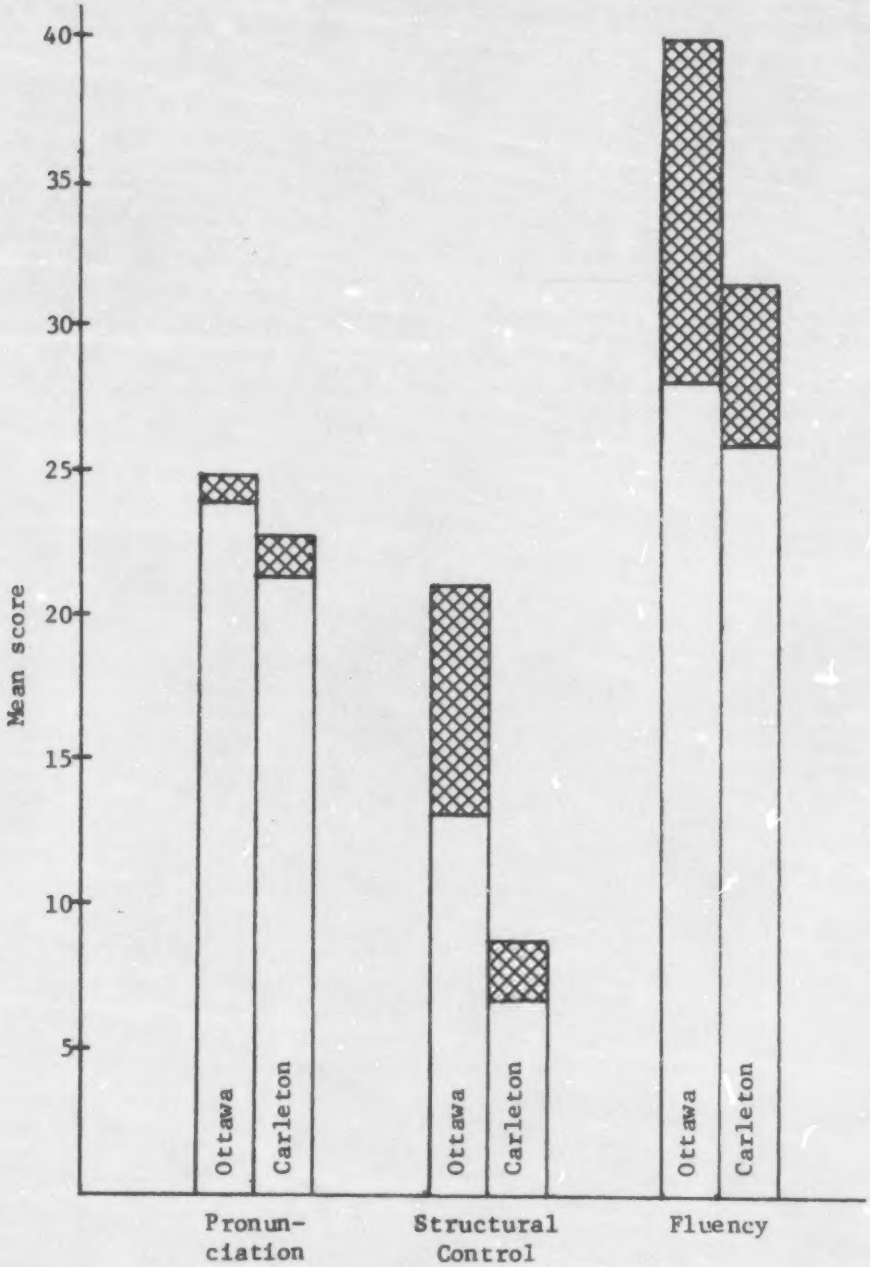
Within all groups, students were found to vary widely in their ability to communicate orally in French. Even among schools in the same program, considerable variation in mean score was evident.

At the grade 3 level, scores on the pronunciation subtest were relatively high, indicating that students in both programs could mimic the various sounds quite successfully. However, scores on the structural control and fluency subtests showed that although neither group was very fluent at that point, the 40-minute core group had the higher scores.

Little or no improvement between grade 3 and grade 5 was seen in the scores on the pronunciation subtest, perhaps because the test involves a restricted number of sounds and scores were substantial at the grade 3 level. However, significant gains in the structural control and fluency scores appeared to be made by students in the 40-minute core program. Differences found at the grade 3 level between the two program groups had become more marked by grade 5. Figure 3.5 shows the mean scores on the three subtests of the IEA I French speaking test for the samples from both boards; the shaded part of each bar represents the difference between grade 3 and grade 5 scores for the group involved.

FIGURE 3.5

IEA I FRENCH SPEAKING TEST RESULTS,
GRADES 3 AND 5, OTTAWA AND CARLETON, 1975 AND 1977



French Speaking, Grades 7 and 8, 1979 and 1980

Oral proficiency was measured again in 1979 at the grade 7 level and once more in 1980 when the leading edge of the 40-minute core program had reached the grade 8 level. The results for the grade 8 groups from the two boards were compared in Chapter Two (Table 2.5); here an attempt will be made to relate grade 8 results to scores at earlier levels. It will be recalled that grade 7 students in 1979 took a three-part speaking test, while grade 8 students in 1980 were given the first two of these subtests plus three sections of a test developed in Ottawa for grade 6 core students.

Table 3.17 compares the grade 7 and 8 samples on their ability and listening test results as well as on their total speaking test scores. In grade 7 the Ottawa sample scored higher on the speaking test, in spite of equivalent scores on the ability and listening measures. In grade 8, however, significant differences existed between the two boards on the listening but not on the speaking test.

TABLE 3.17

FRENCH LISTENING, SPEAKING AND ABILITY RESULTS, GRADES 7 AND 8, OTTAWA AND CARLETON, 1979 AND 1980

Year	Grade	Test	Ottawa			Carleton		
			Mean	SD	N	Mean	SD	N
1979	7	Henmon-Nelson	56.4	14.2	59	55.5	13.0	68
		IEA II Listening	16.0	6.2	59	15.7	5.2	68
		Gr. 7 Speaking†	40.0*	19.1	59	28.6	15.6	68
1980	8	Henmon-Nelson	58.6	15.3	46	55.3	14.0	58
		IEA II Listening	22.0*	9.2	53	18.8	5.4	84
		Gr. 8 Speaking†	77.2	27.4	57	68.4	28.0	82

* Mean for this group is significantly greater than that for the other board ($p < 0.05$)

† Scores on the grade 7 and 8 speaking tests should not be compared since different tests were used

The first two parts of the test (Pimsleur Vocabulary and CCIF questions) were used in both 1979 and 1980. Although the actual pupils included in the testing were not the same, random samples were selected from the same schools in both years. Table 3.18 shows the mean scores on the first two parts of the test for the four student groups, comprising samples from each board in 1979 and 1980. In both grades, the Ottawa mean was significantly higher than that for Carleton on the CCIF questions but not on the vocabulary section. Both groups showed significant gains on the second subtest ($p < 0.05$).

TABLE 3.18

FRENCH SPEAKING TEST RESULTS, PARTS 1 AND 2,
GRADE 7 AND 8, OTTAWA AND CARLETON, 1979 AND 1980

Grade	Program	Part 1: Vocabulary			Part 2: CCIF Questions		
		Mean	SD	N	Mean	SD	N
7	Carleton (585 hours)	13.9	5.2	91	8.5	6.5	91
	Ottawa (930 hours)	14.7	5.9	69	12.8*	5.8	69
8	Carleton (705 hours)	15.8	5.7	90	12.8	6.9	83
	Ottawa (1050 hours)	16.5	5.2	57	15.5*	6.6	57

* Mean for this group is significantly greater than that for the other board ($p < 0.05$)

Table 3.19 shows the per cent of students giving the correct answer to each item in the vocabulary subtest for the four student groups above. The difference between the boards has remained about the same, and there is a tendency for words which have become much better known in one board to also show a considerable increase in the other. It is interesting to note that several words pertaining to food and eating appear to show a large gain in both boards, while another group concerning parts of the body or clothing shows little improvement.

TABLE 3.19

ITEM ANALYSIS: FRENCH SPEAKING TEST, PART 1 (VOCABULARY), OTTAWA AND CARLETON, 1979 AND 1980

	Percent responding correctly			
	CBE gr. 7 (585 hrs.)	CBE gr. 8 (705 hrs.)	OBE gr. 7 (930 hrs.)	OBE gr. 8 (1050 hrs.)
1. *fenêtre*	70	83	74	91
2. *robe*	42	41	36	39
3. *famille, gens*	62	76	67	72
4. *beurre, fromage*	60	68	61	75
5. *école*	80	86	87	83
6. *fleur*	89	87	88	86
7. *chaise*	87	89	77	82
8. *journal*	30	29	25	32
9. *bateaux*	64	57	73	70
10. *tasse*	10	20	17	39
11. *pied*	74	80	81	77
12. *gâteau*	67	79	61	84
13. *petit déjeuner*	17	38	12	35
14. *yeux*	80	91	93	93
15. *bibliothèque*	25	39	54	56
16. *montagne*	20	38	26	40
17. *légumes*	12	20	23	28
18. *chien*	92	90	96	98
19. *argent*	43	38	22	37
20. *boîte*	34	52	39	49
21. *neige, hiver*	56	67	70	75
22. *couteau*	25	42	28	37
23. *ville*	29	29	26	33
24. *chapeau*	89	81	91	90
25. *cuisine*	60	64	44	44
26. *chaussure, soulier*	37	43	45	40
27. *pain*	35	50	52	58

Table 3.20 examines the mean score on each of the CCIF questions for the four groups. It appeared that these questions were much too difficult for the Carleton students in grade 7. By grade 8, however, students could usually make a reasonable response when asked their name in French, although the past tense of a reflexive verb (item 4), *aimer mieux* (item 5) and the future tense (item 8) continued to cause problems.

TABLE 3.20

ITEM ANALYSIS: FRENCH SPEAKING TEST, PART 2 (CCIF QUESTIONS), OTTAWA AND CARLETON, 1979 AND 1980

Question	Mean score on item			
	CBE gr. 7 (585 hrs.)	CBE gr. 8 (705 hrs.)	OBE gr. 7 (930 hrs.)	OBE gr. 8 (1050 hrs.)
1. *Quel est ton nom?*	1.2	2.3	2.3	2.5
2. *Est-ce que tu viens à l'école en autobus?*	0.7	1.6	1.4	2.0
3. *De quelle couleur sont tes yeux?*	1.1	1.5	1.2	1.4
4. *Est-ce que tu t'es brossé les cheveux ce matin?*	0.7	0.7	1.0	0.9
5. *Est-ce que tu aimes mieux jouer au tennis ou faire du ski?*	1.2	0.7	0.7	1.1
6. *As-tu écouté la radio hier soir?*	0.7	1.4	1.8	1.5
7. *Est-ce que tu aimes manger au restaurant?*	0.9	1.4	1.7	1.9
8. *Est-ce que tu vas travailler ce soir?*	0.6	0.8	0.8	1.2
9. *Quelle sont les quatre saisons de l'année?*	0.4	0.9	0.8	1.5
10. *Est-ce que tu peux chanter en français?*	0.9	1.6	1.2	1.5
Mean score	8.4	12.9	12.9	15.5
Number of cases	91	83	69	57

The final three parts of the speaking test permit a comparison (Table 3.21) of grade 8 groups in Ottawa and Carleton with a grade 6 sample in Ottawa to whom this test was administered as part of a city-wide testing program. All groups performed similarly in naming the

classroom objects displayed in front of them, but the Ottawa grade 8 group was better able to cope with questions about them. The Carleton grade 8 group, having had slightly less instructional time in French than the Ottawa grade 6 sample, performed similarly to the latter group, except on the questions (Part 3B). The interrogatives caused considerable difficulty for all groups; the Ottawa grade 8 sample, though not doing well on this section, scored higher than the other two groups.

TABLE 3.21

FRENCH SPEAKING TEST RESULTS, PARTS 3, 4 AND 5, GRADES 6 AND 8, OTTAWA AND CARLETON, 1980

Subtest	Ottawa gr.8 (1050 hours)			Carleton gr. 8 (705 hours)			Ottawa gr. 6 (810 hours)		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Part 3 Classroom Objects									
A Vocabulary (max. = 20)	*13.0	3.8	57	12.0	3.7	83	11.5	4.9	79
B Questions (max. = 32)	*18.4	7.4	57	17.5	7.3	83	15.3	9.0	79
Part 4 Interrogatives									
(max. = 24)	** 9.4	6.0	57	7.1	5.6	82	7.1	6.4	85
Part 5 Picture									
(max. = 18)	*10.9	4.1	57	9.5	4.6	82	9.0	4.2	85

* Mean for this group is significantly greater than that for the Ottawa grade 6 group ($p < 0.05$)

** Mean for this group is significantly greater than those for both other groups ($p < 0.05$)

It is very difficult to provide an overview of oral production testing from grade 3 to grade 8, since three different tests were used, with varying content and types of items. Since both groups had 40 minutes of daily French instruction in grades 6, 7 and 8 while the Ottawa groups had twice as much French in the earlier grades, it might be expected that the Carleton grade 8 group would show signs of catching up to the Ottawa group. However, the present data are insufficient to answer this question, since only two sections of the test can be compared across grades 7 and 8. At the grade 8 level the Ottawa mean score is slightly higher than that for Carleton, but the difference reaches significance on only two parts of the test.

SEX DIFFERENCES: GRADES 6 TO 8, 1979 AND 1980

When results for the grade 7 core French samples from spring 1979 were compared across the two boards by sex, a striking difference was found. On tests of French proficiency, the mean scores for the total group of girls were very similar to those for all the students in the 40-minute Ottawa program. On the other hand, the mean scores for the combined group of boys were like the lower means of the Carleton Board students. The differences in the Henmon-Nelson scores were in the opposite direction to those of French proficiency and were close to significance between the groups of boys and girls combined between boards.

An analysis by sex was performed on the spring 1980 core French results in French proficiency to determine whether this finding was true of other groups of core French students. Table 3.22 presents the results by sex within boards for the spring 1980 French listening comprehension test given in grades 6, 7 and 8 and those from the spring

1979 grade 7 testing. It may be seen that, within each program, girls performed significantly better than boys on the test, with the exception of the Ottawa grade 6 group, where the difference is very nearly significant.

TABLE 3.22

SEX DIFFERENCES IN FRENCH PROFICIENCY SCORES WITHIN BOARDS, GRADE 6, 7 AND 8 CORE FRENCH, OTTAWA AND CARLETON, SPRING 1979 AND 1980

Grade	Year	Sex	Ottawa			Carleton		
			Mean	SD	N	Mean	SD	N
8	1980	Girls	21.8*	7.4	129	19.7*	5.9	237
		Boys	19.8	7.5	133	17.0	5.8	242
7	1979	Girls	18.1*	6.9	223	16.8*	5.4	272
		Boys	15.9	6.7	226	14.5	5.4	288
7	1980	Girls	18.9*	6.6	161	18.6*	6.2	249
		Boys	16.6	6.8	205	17.1	5.7	275
6	1980	Girls	17.7	6.9	122	17.0*	5.3	235
		Boys	16.1	6.3	136	14.9	5.4	261

* Mean for girls is significantly greater than that for boys ($p < 0.05$).

In view of the findings of the foregoing section, it is necessary to examine the results of each group on the Henmon-Nelson ability measure. Table 3.23 gives these results as well as the French listening scores adjusted for ability. This table shows that within each program and for each grade level the boys had higher ability scores than the girls did, although the difference was not always significant. When the French listening scores were adjusted for ability, the girls' scores were slightly increased and the boys' decreased, thus increasing the difference between them. In all cases, the adjusted mean listening score of the girls was significantly greater than that of the boys.

TABLE 3.23

SEX DIFFERENCES IN ABILITY AND ADJUSTED FRENCH LISTENING TEST SCORES, GRADE 6, 7 AND 8 CORE FRENCH, OTTAWA AND CARLETON, SPRING 1979 AND 1980

Grade	Year	Sex	Ottawa			Carleton		
			Mean	SD	N	Mean	SD	N
Henmon-Nelson								
8	1980	Girls	58.8	14.2	113	53.9	12.6	149
		Boys	60.4	14.6	109	56.7	13.0	156
7	1979	Girls	54.3	14.8	216	54.2	13.4	263
		Boys	57.0	15.1	215	55.3	14.2	275
7	1980	Girls	55.0	15.1	152	57.1	13.7	232
		Boys	58.9†	14.3	201	59.9†	12.7	265
6	1980	Girls	48.5	13.9	118	48.4	13.7	223
		Boys	49.6	14.7	133	51.3†	14.1	250
Adjusted IEA II Listening								
8	1980	Girls	22.5*	7.4	113	19.4*	5.9	149
		Boys	19.6	7.5	109	16.4	5.8	156
7	1979	Girls	Adjusted scores not available					
		Boys						
7	1980	Girls	19.3*	6.6	152	19.0*	6.2	232
		Boys	16.4	6.8	201	17.0	5.7	265
6	1980	Girls	17.8*	6.3	122	17.1*	5.3	235
		Boys	16.0	6.9	136	14.8	5.4	261

† Mean for boys is significantly greater than that for girls ($p < 0.05$)

* Mean for girls is significantly greater than that for boys ($p < 0.05$)

Another way of examining these sex differences is to combine the groups from the two boards and compare these sex differences with the mean scores for the total group in each board. These results will be found in Table 3.24. In each of the levels, the total group of girls performed about the same as or even better than the total Ottawa group, and the total group of boys had a mean that was lower, in each case,

than that of the whole Carleton sample. Table 3.24 also shows that in each case the mean of the total group of girls was significantly greater than that of the total group of boys.

TABLE 3.24

SEX DIFFERENCES IN FRENCH PROFICIENCY SCORES: TOTAL GROUP DIFFERENCES, GRADE 6, 7 AND 8 CORE FRENCH, OTTAWA AND CARLETON, SPRING 1979 AND 1980

Grade	Year	Group	IEA II Listening		
			Mean	SD	N
8	1980	Total, Ottawa	20.8	7.5	262
		Total, girls	20.4*	6.6	366
		Total, Carleton	18.3	6.0	479
		Total, boys	18.0	6.6	375
7	1979	Total, Ottawa	17.0	6.9	450
		Total, girls	17.4*	6.1	495
		Total, Carleton	15.6	5.5	561
		Total, boys	15.1	6.0	514
7	1980	Total, Ottawa	17.6	6.8	366
		Total, girls	18.7*	6.3	410
		Total, Carleton	17.8	6.0	524
		Total, boys	16.9	6.2	480
6	1980	Total, Ottawa	16.9	6.6	258
		Total, girls	17.2*	5.9	357
		Total, Carleton	15.9	5.5	496
		Total, boys	15.3	5.8	397

* Mean for girls is significantly greater than that for boys (significance based on a Scheffé pairwise comparison test, $p < 0.05$)

It is also of interest to refer back to Table 3.23 and compare the results of the same sex between boards at each of the levels tested. The only significant difference between girls in the Ottawa and Carleton boards occurred in grade 8 where the Ottawa girls did score significantly higher than the Carleton girls. For the boys, the Ottawa groups also had mean scores significantly higher than the Carleton boys in grade 8.

INTERCORRELATIONS: GRADES 6 TO 8, 1978 TO 1980

As had been done in the previous year, product-moment correlations were calaculated between various pairs of variables for the groups tested in the spring of 1980. The results obtained can be classified into several categories and will be described under these headings. Two sets of intercorrelations deal with listening comprehension tests; in one case correlations were obtained between the same test (IEA II) given to students at different times, while in another case two different measures of listening comprehension can be compared. It was also possible to make comparisons between French speaking and French listening measures, and between measures of ability and of French proficiency. The sections which follow present results of these comparisons.

Listening Comprehension

Test-retest. Table 3.25 presents the correlations between the IEA II French Listening Comprehension Test administered to the same students in different years, providing essentially a test-retest situation. In Ottawa, students' listening scores shared almost 70 per cent of their variance between grades 7 and 8, whereas only 53 per cent was shared between grades 6 and 7 and 40 per cent between grades 6 and 8. For Carleton, the corresponding percentages of shared variance ranged from 27 per cent to 48 per cent (found by squaring the r value in each case).

TABLE 3.25

CORRELATIONS BETWEEN DIFFERENT ADMINISTRATIONS OF THE IEA II FRENCH LISTENING TEST, GRADES 6-8 CORE FRENCH, OTTAWA AND CARLETON, 1978-1980

Measures	Ottawa		Carleton	
	r	N	r	N
Gr. 8 (1980) vs Gr.7 (1979)	0.84	216	0.69	297
Gr. 8 (1980) vs Gr.6 (1978)	0.63	57	0.52	100
Gr. 7 (1979) vs Gr.6 (1978)	0.73	95	0.66	127

Different listening comprehension tests. It is also possible to examine the relationship between the IEA II French Listening Comprehension Test (IEA II FLC) and the OBE French Comprehension Test (FCT) for several Ottawa groups. Results presented in Table 3.26 are for the three grade-level groups who took both tests in 1980 and for smaller groups of students who took the IEA II test in an earlier year. The correlations between these two tests at each of the three grade levels are very consistent in 1980, showing a shared variance of between 53 and 62 per cent. For the smaller groups tested over a one or two year period the shared variance was 40 per cent for 1978-1980 and 54 per cent for 1979-1980.

TABLE 3.26

CORRELATIONS BETWEEN THE IEA II FRENCH LISTENING TEST (1978-1980) AND THE OBE FRENCH LISTENING COMPREHENSION TEST (1980), GRADES 6-8, OTTAWA

Group and test	r	N
IEA II Gr. 8 1980 vs OBE FCT Gr. 8 1980	0.79	186
IEA II Gr. 7 1980 vs OBE FCT Gr. 7 1980	0.73	279
IEA II Gr. 6 1980 vs OBE FCT Gr. 6 1980	0.77	226
IEA II Gr. 7 1979 vs OBE FCT Gr. 8 1980	0.74	151
IEA II Gr. 6 1978 vs OBE FCT Gr. 8 1980	0.63	55

Listening Comprehension vs French Speaking

The correlations between the IEA II French listening comprehension test and the two different speaking tests administered in 1979 and 1980 are shown in Table 3.27. It will be seen that these correlations are of the same general magnitude as were those between the French listening

tests. The correlations between the OBE French listening test and the speaking test for the Ottawa grade 8 group were similar, indicating a shared variance of 45 per cent.

TABLE 3.27

CORRELATIONS BETWEEN IEA II LISTENING TEST AND TWO FRENCH SPEAKING TESTS (1979-1980), GRADES 6-8, OTTAWA AND CARLETON

Measures	Ottawa		Carleton	
	r	N	r	N
IEA II Gr. 8 1980 vs Fr. Speaking Gr. 8 1980	0.74	53	0.74	77
IEA II Gr. 7 1979 vs Fr. Speaking Gr. 8 1980	0.75	46	0.69	58
IEA II Gr. 7 1979 vs Fr. Speaking Gr. 7 1979	0.59	68	0.59	72
OBE FCT Gr. 8 1980 vs Fr. Speaking Gr. 8 1980	0.67	43	-	-

Correlations among the speaking subtests and the listening tests were also calculated and are given in Table 3.28 for Carleton and Table 3.29 for Ottawa. Spearman correlations (based on rank) were used, since the scoring procedures of the speaking test are ill-suited to the calculation of the Pearson product-moment correlations shown in earlier tables. In Carleton, the relationships between the listening test and the various subtests of the speaking test ranged from 0.59 to 0.75, while the intercorrelations of the speaking subtests varied from 0.71 to 0.82. In Ottawa, the correlations between subtests of the speaking test ranged from 0.60 to 0.79.

TABLE 3.28

SPEARMAN CORRELATIONS BETWEEN IEA II LISTENING TEST AND FRENCH SPEAKING SUBTESTS, CARLETON, 1980

	Speaking Part 1	Speaking Part 2	Speaking Part 3	Speaking Part 4	Speaking Part 5
IEA II	0.65	0.69	0.70	0.67	0.58
Speaking Part 1	-	0.73	0.82	0.71	0.75
Speaking Part 2	-	-	0.81	0.73	0.71
Speaking Part 3	-	-	-	0.79	0.80
Speaking Part 4	-	-	-	-	0.71

TABLE 3.29

SPEARMAN CORRELATIONS BETWEEN TWO LISTENING TESTS AND FRENCH SPEAKING SUBTESTS, OTTAWA, 1980

	OBE FCT	Speaking Part 1	Speaking Part 2	Speaking Part 3	Speaking Part 4	Speaking Part 5
IEA II	0.73	0.59	0.72	0.61	0.75	0.71
OBE FCT	-	0.62	0.72	0.60	0.71	0.66
Speaking Part 1	-	-	0.64	0.70	0.72	0.67
Speaking Part 2	-	-	-	0.77	0.76	0.69
Speaking Part 3	-	-	-	-	0.70	0.69
Speaking Part 4	-	-	-	-	-	0.79

Ability vs French Proficiency

In 1979 (Sixth Annual Report of the FRENCH Project), correlations computed between French proficiency tests and ability measures were found to be low. Table 3.30 presents such correlations, obtained from the results of listening comprehension tests given in spring 1980 and in the previous year. It will be seen that for both the IEA II and the OBE French listening tests the correlations with ability are low, sharing between 7 and 23 per cent of the variance.

TABLE 3.30

CORRELATIONS BETWEEN LISTENING COMPREHENSION TESTS AND HENMON-NELSON TEST, GRADES 6-8, OTTAWA AND CARLETON, 1979-1980

Measure and groups		Ottawa		Carleton	
		r	N	r	N
IEA II	Grade 8 (1980)	0.48	222	0.28	304
	Grade 7 (1980)	0.32	353	0.36	497
	Grade 6 (1980)	0.38	251	0.26	473
	Grade 7 (1979)	0.36	432	0.31	539
OBE FCT	Grade 8 (1980)	0.35	155	-	-
	Grade 7 (1980)	0.39	273	-	-
	Grade 6 (1980)	0.43	219	-	-

The correlations between the Henmon-Nelson ability scores and the total French speaking scores, as shown in Table 3.31, are also low and of much the same magnitude as found with the ability measure and French listening scores. The low correlations between the ability measure and the French proficiency tests suggest that the abilities measured by the Henmon-Nelson test are minimally related to second-language proficiency skills in listening and speaking at this level.

TABLE 3.31

CORRELATIONS BETWEEN TESTS OF ABILITY AND FRENCH SPEAKING, GRADES 6-8, OTTAWA AND CARLETON, 1979-1980

Measures	Ottawa		Carleton	
	r	N	r	N
Henmon-Nelson vs				
Grade 8 (1980) French Speaking	0.30	66	0.39	77
Grade 7 (1979) French Speaking	0.44	46	0.31	59

SUMMARY

This chapter has provided an overview of the results of testing French proficiency in the core programs of the Ottawa and Carleton Boards of Education from 1973 to 1980. On the listening comprehension tests given to the leading edge of students in the Ottawa 40-minute program and to the group at the same level in Carleton, students at the grade 6, 7 and 8 levels in the former group, with more cumulative time in French, performed significantly better. In a cross-sectional study done in 1980 at these grade levels, the Ottawa groups performed significantly better at the grade 6 and grade 8 levels, but at grade 7 the mean scores were almost identical after adjustment for ability. Correlations between ability and French listening scores were not high, but there may be other factors involved about which no information is available. A cross-sectional examination of results on a listening comprehension test given only to grades 6 through 8 in Ottawa showed an increase from one grade level to the next, but the change was significant only between grade 7 and grade 8.

A subgroup of the 1980 grade 6 group in the Carleton Board was composed of students who had been enrolled in the CEL program in grades 4 and 5. The mean listening score, adjusted for ability, was significantly greater than that for regular core students in either board. The mean score was also slightly higher than the Carleton grade 8 score, although the CEL group had received less cumulative time in French than either of the other grade 6 groups and about the same amount as the older Carleton grade 8 group.

When a listening comprehension test was given to CEL students at the grade 4 and 5 level and to regular program students in the same schools, there was an increasing gap between the higher performing CEL

groups and those in the core program; however, differences in ability also favoured the CEL group. When the grade 5 results of the Carleton CEL group were compared to those at the same grade level in the Ottawa core program, there was a non-significant difference in favour of the grade 5 students in CEL over those in the 40-minute program, although the latter had spent almost 20 per cent more time in learning French.

Listening comprehension tests given to groups from grade 1 to grade 5 in the two boards showed significant gains over the school year. It was also found that spring results were usually higher than those for the same group the following autumn, probably because of forgetting over the summer months. A replication in spring 1976 of the grade 2 testing done two years previously showed significantly lower mean scores; however, when grade 4 students were tested in 1976 and 1979, the latter group had higher scores.

Also presented in this chapter are results of measures of the speaking proficiency of students in core programs in the two boards. On tests given in grades 3 and 5 the Ottawa group showed significant gains in structural control and fluency. Differences between the grade 3 groups in Ottawa and Carleton had become more pronounced by grade 5 and favoured the Ottawa group, which had spent about twice as much time in French instruction. At the grade 7 and 8 levels there were significant differences between the two boards in scores on the subtest involving complete answers to questions, but on several other subtests the differences were not significant.

Item analysis data provided an indication of certain specific strengths and weaknesses in the students' knowedge of French. When results at the grade 6, 7 and 8 levels were analysed by sex, it was found that within each program the girls performed better than the

boys, in spite of the fact that these groups of girls tended to have lower ability scores than the boys.

When the correlations between two measures of listening comprehension used in grades 6 to 8 were examined, it was found that relationships were consistent at the three grade levels, the shared variance being between 53 and 62 per cent. Correlations of about the same magnitude were found between the speaking and the listening tests, but correlations between French proficiency tests and ability measures at these grade levels tended to be low.

Chapter Four

FRENCH PROFICIENCY: HIGH SCHOOL BILINGUAL PROGRAMS

INTRODUCTION

At the high school level the 1980 contract with the Ministry of Education was concerned with the French proficiency of students in bilingual programs at the grade 10 and grade 12 levels. Initially, the high school bilingual programs had provided students from elementary school core programs with another entry point to bilingual education. As other programs became established, however, relatively few students entered grade 9 of the bilingual high schools without previous exposure to immersion or some other French language environment. By the fall of 1979, most of the students in these programs were graduates of late immersion, and graduates of the first sizable groups in kindergarten-entry immersion programs had reached grade 9.

Programs and Groups Studied

As in previous years, enrolment in the appropriate French Language course was used as the first criterion for inclusion in any analysis group. Since students at both the grade 10 and the grade 12 level in the bilingual program have been traced since entry to an immersion or bilingual program in Ottawa or Carleton, it was possible to identify several student groups of similar background.

In the 1979-80 school year there were groups of bilingual-program students at the grade 12 level in three Carleton Board schools, consisting largely of graduates of the grade 7 entry immersion program of that board. There was also a large group of students at that level in the bilingual program in one Ottawa high school and a smaller number in a second high school. The first group to experience the full Ottawa late-entry program, beginning in grade 6, and to complete four years of

the bilingual high school program reached grade 12 in 1979-80. There was also an atypical group of grade 12 students in Ottawa who had begun a bilingual program in grade 7 as the program was introduced across three grade levels in their schools.

At the grade 10 level a bilingual program existed in 1979-80 at three Ottawa and three Carleton Board high schools. At the same level, at three other Ottawa schools it was possible to test groups of students enrolled in a special French course intended primarily for graduates of the primary- or late-entry immersion program who did not enroll in the bilingual sequence.

Table 4.1 shows the number of years in immersion and the cumulative time spent in French instruction up to grade 10 or grade 12 for the three main groups of students considered in this report. These consist of students who entered the late immersion program at the grade 6 level in Ottawa and at the grade 7 level in Carleton, as well as the group from Ottawa which began that program at the seventh grade level. All these students followed a core French program consisting of 20 minutes of French instruction daily prior to entering the immersion or bilingual program.

TABLE 4.1

TIME SPENT IN FRENCH BY STUDENTS IN GRADE 10 AND GRADE 12 OF BILINGUAL PROGRAMS IN OTTAWA AND CARLETON

Program	Grade 10			Grade 12		
	Years in immersion	Cum. hrs.	No. of cases	Years in immersion	Cum. hrs.	No. of cases
Grade 6 entry, Ottawa	5	3045	70	7	3945	13
Grade 7 entry, Ottawa	4	2205	23	6	3105	46
Grade 7 entry, Carleton	4	2385	67	6	2925	23

Two additional groups will be considered for comparative purposes where relevant; the first consists of students who entered the Ottawa high school bilingual program after spending some time in a French-language school, although information is not available concerning the amount of time spent in such a school. The second additional group consists of grade 10 students who entered the bilingual high school program in Ottawa from an English-language separate school where the program included an unknown amount of French instruction.

Instruments

The grade 10 students in the bilingual program and those in special French classes were given tests of French proficiency measuring their skills in listening comprehension, reading and writing. In addition, a French cloze test was administered to all grade 10 groups and a test of French designed for francophone students was used with the bilingual program students. Grade 12 students in the bilingual program took the same tests as their grade 10 counterparts, with the exception of the listening test. Although a speaking test had been included in previous testing of students at this level, through cooperation with the federal government language programs, it was not possible to administer these tests to any of the high school groups in the 1979-80 school year. A more detailed description of the tests used in the spring of 1980 is given below.

IEA tests. A series of tests in French as a second language was developed by the International Association for the Evaluation of Educational Achievement (Carroll, 1975). The listening comprehension, reading and writing tests used with students in the bilingual programs were the most difficult in this series; the listening and reading tests are designated as being for the IEA Population IVS, while the

writing test is for Population IV. The Population IV tests were originally intended for students who had received three or four years of secondary level French instruction; Population IVS students were that subset of students who planned to specialize in French at a post-secondary institution. The listening test contains 37 items in which the student is required to select from pictured or written alternatives the correct answer to questions about the recorded French selections. The 36 multiple-choice items in the reading test are designed to measure the student's ability to comprehend written French material. The writing test consists of 42 completion-type items requiring the student to supply a variety of different types of words.

Cloze test. The Test de mots à trouver, Niveau D, is a 25-minute French competency test developed by the Ontario Institute for Studies in Education for use with immersion classes. The student is presented with a text of approximately 300 words in which every seventh word is missing; students are required to supply the missing words and write them in the blanks provided. Such a cloze-type test may be scored in one of two ways. In the first, a mark is given for any suitable word, while in the second, credit is only given for the exact word found in the original text. All scores given in this report are based on the exact-word method of scoring.

Tests de français. This series for francophone students was developed within the Quebec school system to measure reading and language usage. The grade 10 students in the bilingual and special French programs were given the 35-item test designed for francophone students in Secondaire I (first year of the five-year secondary school sequence). Since the longer test for Secondaire IV contained some sections similar to other tests being used, it was decided to adminis-

ter to the grade 12 bilingual-program students only Part 3 of this test, with 60 items on vocabulary, paragraph completion, spelling and identification of grammatical errors.

Ability measures. For students in Ottawa, scores on the Henmon-Nelson Test of Mental Ability (level 9-12) and on three subtests of the Differential Aptitude Test (DAT) were available from the city-wide testing program at the grade 9 level. The three DAT subtests used are Verbal Reasoning (VR), Numerical Ability (NA), and Abstract Reasoning (AR). In addition, most of the grade 10 bilingual-program students in both boards had taken the level 6-9 version of the Henmon-Nelson test three years earlier.

RESULTS

Grade 10 Bilingual Program, 1980

IEA test results. Table 4.2 presents results on three IEA French proficiency tests at the grade 10 level for the three late immersion groups listed in Table 4.1, as well as for the two special groups mentioned earlier, most of whom entered the bilingual program at the grade 9 level in Ottawa. One of these consisted of about 30 students who came from English-language separate schools in Ottawa and another of about 20 students who had attended French-language schools for an unknown length of time before entering the bilingual program.

Results for the IEA listening, reading and writing tests demonstrate that at the grade 10 level students from French-language schools scored significantly higher on these tests of French proficiency than grade 6 or grade 7 entrants to immersion. The one exception to this rule occurred with the writing test, where the Carleton grade 7 entrants did not differ from the students from French-language schools.

Further group differences among grade 10 students in bilingual high schools were found only on the listening test. The grade 9 entrants from English-language separate schools had significantly higher listening scores than grade 7 entry Carleton students. In addition, the grade 6 Ottawa entrants' listening scores were significantly higher than were those for the Carleton grade 7 entry group, although it should be noted that the grade 6 entry group consisted of students at the grade 10 level in only two of the three Ottawa high schools with bilingual programs.

TABLE 4.2

GRADE 10 FRENCH PROFICIENCY RESULTS: IEA TESTS FOR FIVE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1980

Group	IEA IVS Listening			IEA IVS Reading			IEA IV Writing		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
From late immersion									
Grade 7 entry, Ottawa (2205 hours)	22.6	6.6	21	21.8	6.6	22	26.8	8.3	22
Grade 7 entry, Carleton (2385 hours)	19.5#	5.8	58	22.5	5.6	59	28.1*	6.2	59
Grade 6 entry, Ottawa (3045 hours)	24.3†	3.6	43	22.4	5.5	66	26.1	5.0	67
High school entry groups									
From English-language separate schools	26.2	5.5	26	24.2	5.7	30	28.6	5.8	30
From French-language schools	29.0*	4.9	18	27.8*	5.0	20	32.4*	5.1	20

† One school had to be omitted because of unavoidable variation in administration procedure.

* Scores on all tests taken by the group from French-language schools are greater than those for all late immersion groups, with the exception of the writing test for the Carleton grade 7 entry group (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

\# Mean for this group is significantly less than those for the Ottawa grade 6 entry group and the group from English-language separate schools.

It is also possible to compare students of similar background at different schools; for both the Ottawa grade 6 entry group and the Carleton grade 7 entry group, there were more than ten students at each of the three Ottawa and Carleton schools, respectively. Table 4.3 shows means for these subgroups on the three IEA tests. Differences are not large or, in most cases, statistically significant, but are presented here as an indication of differences in emphasis in schools, all of which offer a 'bilingual program'. Course selection available and individual teachers' methods undoubtedly play a part in determining which skills receive greatest emphasis.

TABLE 4.3

GRADE 10 FRENCH PROFICIENCY RESULTS BY SCHOOL: IEA TESTS FOR TWO BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1980

Group	IEA IVS Listening			IEA IVS Reading			IEA IV Writing		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Grade 6 entry, Ottawa									
School A	24.3	3.6	31	23.9	5.4	34	26.3	4.7	35
School B	-	-	-	19.5	5.4	21	25.8	5.7	21
School C	24.5	3.6	12	23.3	4.0	11	25.9	4.9	11
Grade 7 entry, Carleton									
School D	15.8	3.9	24	21.0	6.0	24	28.5	6.5	23
School E	19.8	5.4	14	21.7	5.1	14	26.8	6.9	15
School F	23.8	5.2	20	24.7	4.9	21	28.6	5.3	21

It is possible to measure the growth of the three main late-entry immersion groups in French writing skills, since the same IEA writing test was used as part of a battery measuring French proficiency given to students at the end of grade 8. Means obtained at the grade 8 and the grade 10 level for the three groups are shown in Table 4.4; these are based on those students present for both tests. All three groups

have made significant gains in the two-year period. Moreover, there appears to be a tendency for the differences between groups to be decreasing.

TABLE 4.4

GRADE 8 AND 10 FRENCH WRITING RESULTS: IEA IV TEST FOR THREE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1978 AND 1980

Group	Grade 8 IEA IV Writing			Grade 10 IEA IV Writing		
	Mean	SD	N	Mean	SD	N
Grade 7 entry, Ottawa	18.8	8.4	19	26.6*	8.9	19
Grade 7 entry, Carleton	22.9	7.1	58	28.1*	6.2	58
Grade 6 entry, Ottawa	19.7	6.2	45	26.8*	5.0	45

* Grade 10 mean is significantly greater than that for grade 8 ($p < 0.05$).

It is also possible to consider scores of these three groups on French listening and reading tests done at the end of grade 8. Since these tests were the IEA Population IV rather than the IVS as done in grade 10, scores cannot be compared to determine growth. However, when the grade 8 mean scores as shown in Table 4.5 below are examined along with the grade 10 means in Table 4.2, it is found that some shift in the relative proficiency of the groups appears to have taken place.

TABLE 4.5

GRADE 8 FRENCH PROFICIENCY RESULTS: IEA IV LISTENING COMPREHENSION AND READING TESTS FOR THREE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1978

Group	IEA IV Listening			IEA IV Reading		
	Mean	SD	N	Mean	SD	N
Grade 7 entry, Ottawa	24.2	5.5	18	23.1	6.8	19
Grade 7 entry, Carleton	30.9*	4.9	58	25.8	5.3	59
Grade 6 entry, Ottawa	30.7*	5.0	46	27.0*	4.7	47

* Mean for this group is significantly greater than that for the Ottawa grade 7 entry group on the same test ($p < 0.05$).

A final comparison was made between the grade 10 groups tested in the spring of 1980 and those of similar backgrounds tested over the past five years, with the same IEA tests of French listening comprehension, reading and writing. This information is presented in Table 4.6, showing the groups of similar background together. The Ottawa grade 6 and grade 7 entry groups have mean scores which are remarkably consistent over the years, while more variation can be observed in those for the other groups. Especially for the high school entry groups, the actual backgrounds of the students may vary from year to year. It may also be observed from this table that the proportions of students in the various groups has changed over the years, as noted earlier; in particular, no results are available in 1980 for students entering a bilingual program at the grade 8 or 9 level from the Ottawa core program.

TABLE 4.6

GRADE 10 FRENCH PROFICIENCY RESULTS: IEA TESTS
FOR BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, 1976-1980

Group	IEA IVS Listening			IEA IVS Reading			IEA IV Writing		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Grade 9 entry, Ottawa (1545 hours)									
1978	23.8	6.3	24	19.4	7.1	25	25.2	7.1	27
1977	22.2	6.2	39	19.4	5.9	36	24.2	7.7	35
1976	21.0	5.3	37	18.9	5.8	39	21.1	6.8	40
Grade 8 entry, Ottawa (1875 hours)									
1978	20.7	8.4	9	23.7	5.2	10	26.6	7.6	10
1977	22.8	4.6	51	20.3	4.7	51	25.4	5.9	54
1976	25.4	4.2	23	21.1	4.9	24	25.0	6.1	23
Grade 7 entry, Ottawa (2205 hours)									
1980	22.6	6.6	21	21.8	6.6	22	26.8	8.3	22
1978	22.4	6.2	48	21.0	5.7	41	26.7	5.6	60
1977	23.6	3.7	19	21.4	3.7	15	26.3	6.7	16
Grade 7 entry, Carleton (2385 hours)									
1980	19.5	5.8	58	22.5	5.6	59	28.1	6.2	59
1978	20.6	6.6	49	20.6	5.7	49	25.3	7.6	50
1977	24.3	5.2	27	24.6	6.0	25	26.3	7.8	24
Grade 6 entry, Ottawa (3045 hours)									
1980	24.3	3.6	43	22.4	5.5	66	26.1	5.0	67
1978	24.3	4.7	16	22.3	6.3	13	26.7	6.0	20
From French-language schools									
1980	29.0	4.9	18	27.8	5.0	20	32.4	5.1	20
1978	32.0	4.4	10	-	-	-	31.3	5.6	14
1977	27.9	5.7	15	27.6	5.5	15	29.9	5.4	14
1976	31.4	3.6	22	28.3	5.6	20	33.1	5.2	19

Test de français. Results for the five groups of grade 10 students on the Test de français, Secondaire I, are given in Table 4.7 below. Results for grade 8 immersion students in Ottawa and Carleton who took this test in the spring of 1979 and 1980 are also included for comparative purposes. No significant differences were found between

any of the grade 10 bilingual-program groups from English-language schools. All grade 10 groups scored significantly higher than the grade 8 late-entry groups tested in 1979 and 1980 and were not significantly different from the Carleton primary-entry groups. Results for grade 8 immersion groups tested in 1980 will be discussed in the next chapter.

TABLE 4.7

GRADE 8 AND 10 FRENCH PROFICIENCY RESULTS: TEST DE FRANCAIS FOR IMMERSION AND BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1979 AND 1980

Group	Test de français, Secondaire I		
	Mean	SD	N
Grade 10 Bilingual Program 1980			
Grade 7 entry, Ottawa (2205 hours)	22.7	4.6	22
Grade 7 entry, Carleton (2385 hours)	23.5	4.4	57
Grade 6 entry, Ottawa (3045 hours)	22.9	3.8	67
From English-language separate schools	22.8	4.7	30
From French-language schools	25.9	4.6	21
Grade 8 Immersion 1979			
Late-entry, Carleton (1845 hours)	15.7*	4.1	127
Late-entry, Ottawa (2145 hours)	15.8*	4.7	147
Primary-entry, Carleton (5580 hours)	24.1	4.5	61
Primary-entry, Ottawa (5580 hours)	21.1	5.9	58
Grade 8 Immersion 1980			
Late-entry, Carleton (1845 hours)	17.7*	4.5	139
Late-entry, Ottawa (2145 hours)	18.2*	5.0	112
Primary-entry, Carleton (5580 hours)	23.3	4.5	54
Primary-entry, Ottawa (5580 hours)	20.6	4.5	139

* Mean for this group is significantly lower than those for the grade 10 groups ($p < 0.05$).

These scores may be compared with the norms for francophone students at the Secondaire I level, given in Table 4.8. It may be seen that the group consisting of students who have attended francophone schools scored at the seventh stanine while the four other grade 10 bilingual-program groups all have stanine scores of 6. That is, the grade 10 bilingual-program students in the 1980 sample from anglophone schools have mean scores higher than 60 to 80 per cent of the francophone students in their first year of secondary school who took this test.

TABLE 4.8

NORMATIVE DATA FOR FRANCOPHONE STUDENTS IN QUEBEC ON TEST DE FRANCAIS, SECONDAIRE I

Raw score	Percentile	Stanine
32 - 35	97 - 99	9
29 - 31	90 - 96	8
25 - 28	78 - 89	7
22 - 24	61 - 77	6
18 - 21	41 - 60	5
14 - 17	24 - 40	4
11 - 13	12 - 23	3
8 - 10	5 - 11	2
0 - 7	1 - 4	1

Test de mots à trouver (Cloze test). Means for the grade 10 groups on the Test de mots à trouver are shown in Table 4.9, along with those for the 1979 and 1980 grade 8 immersion groups. Means for all the grade 10 groups except for Ottawa grade 7 entry were significantly greater than those for the 1979 grade 8 late-entry immersion groups, while not differing significantly from each other nor from those of the grade 8 primary-entry immersion groups. Results for grade 8 immersion groups tested in 1980 are discussed further in the next chapter.

TABLE 4.9

GRADE 8 AND 10 FRENCH PROFICIENCY RESULTS: TEST DE MOTS A TROUVER FOR IMMERSION AND BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1979 AND 1980

Group	Test de mots à trouver		
	Mean	SD	N
Grade 10 Bilingual Program 1980			
Grade 7 entry, Ottawa (2205 hours)	19.2	4.7	22
Grade 7 entry, Carleton (2385 hours)	21.0	3.5	58
Grade 6 entry, Ottawa (3045 hours)	20.3	3.6	67
From English-language separate schools	20.3	4.5	30
From French-language schools	22.4	5.5	20
Grade 8 Immersion 1979			
Late-entry, Carleton (1845 hours)	15.9*	4.2	159
Late-entry, Ottawa (2145 hours)	15.2*	4.0	177
Primary-entry, Carleton (5580 hours)	21.8	3.9	66
Primary-entry, Ottawa (5580 hours)	20.2	4.5	83
Grade 8 Immersion 1980			
Late-entry, Carleton (1845 hours)	17.1*	3.8	139
Late-entry, Ottawa (2145 hours)	17.1*	4.1	112
Primary-entry, Carleton (5580 hours)	19.9	3.5	54
Primary-entry, Ottawa (5580 hours)	19.3	3.8	139

* Mean for this group is significantly lower than those for the grade 10 groups except for Ottawa grade 7 entry ($p < 0.05$).

Aptitude tests. For the Ottawa Board groups, results were available on four ability measures given at the beginning of high school. The 9-12 level of the Henmon-Nelson test and the Verbal Reasoning score of the Differential Aptitude Test (DAT) are English-language measures of verbal ability, while the DAT Numerical Ability and Abstract Reasoning Tests are two nonverbal measures. Results on these two sets of tests for four subgroups of grade 10 bilingual high school students in Ottawa are given in Tables 4.10 and 4.11.

TABLE 4.10

RESULTS OF GRADE 9 VERBAL ABILITY MEASURES
FOR OTTAWA GROUPS IN GRADE 10 OF BILINGUAL HIGH SCHOOLS, SPRING 1980

Group	Henmon-Nelson (9-12)			DAT Verbal Reasoning		
	Mean	SD	N	Mean	SD	N
From late immersion						
Grade 7 entry	63.3	10.3	21	29.5	8.7	22
Grade 6 entry	61.6	8.6	59	28.5	8.6	66
High school entry groups						
From English-language separate schools	57.5	7.8	30	25.5	6.9	30
From French-language schools	50.9	9.6	17	21.2	6.8	17

TABLE 4.11

RESULTS OF GRADE 9 NONVERBAL ABILITY MEASURES
FOR OTTAWA GROUPS IN GRADE 10 OF BILINGUAL HIGH SCHOOLS, SPRING 1980

Group	DAT Numerical Ability			DAT Abstract Reasoning		
	Mean	SD	N	Mean	SD	N
From late immersion						
Grade 7 entry	26.0	6.9	22	38.2	6.9	15
Grade 6 entry	22.5	6.0	66	37.4	6.5	56
High school entry groups						
From English-language separate schools	23.8	7.5	30	33.8	5.7	27
From French-language schools	18.2	8.7	17	37.4	4.7	15

Although the small group of grade 7 entry Ottawa students had higher scores on all four ability tests, none of the differences is significant. The group from French-language schools had mean scores similar to those of the other groups on the DAT Abstract Reasoning Test,

but significantly lower on the other tests. In the case of the two verbal tests, this last finding suggests that for many students in this group, an English-language verbal aptitude test was inappropriate.

Although aptitude scores obtained at the high school level were not available for the Carleton late-entry groups, some data available from grade 7 were used to compare the three late immersion groups. Mean scores on a lower level of the Henmon-Nelson test for the grade 7 entry students in Ottawa and Carleton were about the same (66.7 and 66.5 respectively), while that for a subgroup (N = 35) of the Ottawa grade 6 entry group was 71.5. However, at the grade 9 level, for the same 35 students, the mean score on the Henmon-Nelson did not differ from that of the Ottawa grade 7 entry group. This makes it difficult to assess the relative ability levels of these groups.

Grade 10 Special French, 1980

In addition to the grade 10 students in bilingual high schools it has already been mentioned that special arrangements were made for some Ottawa students from immersion programs who did not attend the bilingual high school. Some students took only special French courses in grades 9 and 10 (French 1S and French 2S), while others took Geography and History in French as well. Among these students were a few who had graduated from the primary-entry immersion sequence in one school, the first group of these students to reach grade 10.

In this section results of French proficiency tests will be presented first for grade 10 students taking only the special French course for two years and for those taking the two additional courses as well. The latter program was available at only one school and Table 4.12 gives results by school for both groups. Some very pre-

liminary results for the small groups who graduated from primary- or late-entry immersion will also be reported later.

TABLE 4.12

FRENCH PROFICIENCY RESULTS FOR OTTAWA GRADE 10 STUDENTS TAKING SPECIAL FRENCH COURSES, SPRING 1980

	Students taking French 1S and 2S only			Students taking French 1S, 2S, Hist., Geog.		
	Mean	SD	N	Mean	SD	N
IEA IVS Listening						
School A	28.7	5.5	12	31.0	3.8	21
School B	21.9	3.9	12	not applicable		
School C	21.0	6.2	9	not applicable		
IEA IVS Reading						
School A	26.4	7.1	11	26.4	5.7	25
School B	17.8	2.3	12	not applicable		
School C	19.8	6.9	15	not applicable		
IEA IV Writing						
School A	31.9	5.1	12	31.0	6.5	24
School B	23.5	5.4	12	not applicable		
School C	17.1	7.7	14	not applicable		
Tests de mots à trouver						
School A	23.8	4.0	12	23.3	3.5	24
School B	18.1	1.9	12	not applicable		
School C	16.6	4.6	14	not applicable		

For these students, aptitude test scores obtained in grade 9 are available and are shown in Table 4.13. There appear to be differences among groups, but it will be observed that the groups are very small and it is therefore premature to draw any conclusions based on these data.

TABLE 4.13

GRADE 9 APTITUDE TEST RESULTS FOR OTTAWA GRADE 10 STUDENTS TAKING SPECIAL FRENCH COURSES, SPRING 1980

	Students taking French 1S and 2S only			Students taking French 1S, 2S, Hist., Geog.		
	Mean	SD	N	Mean	SD	N
DAT Verbal Reasoning						
School A	34.8	6.2	11	28.0	6.4	25
School B	26.8	8.6	10	not applicable		
School C	29.2	11.9	13	not applicable		
DAT Numerical Ability						
School A	29.3	5.2	11	26.2	5.5	25
School B	24.1	6.3	10	not applicable		
School C	23.1	8.9	13	not applicable		
DAT Abstract Reasoning						
School A	40.3	5.9	11	39.6	4.9	25
School B	37.4	4.8	10	not applicable		
School C	35.1	8.4	13	not applicable		

It was possible to find scores on the three IEA French proficiency tests for 12 students from primary-entry immersion who took four French courses in grades 9 and 10 at School A and for 15 students from late-entry immersion who took only the two special French courses at these levels. It is not at all surprising that the primary-entry group tended to have higher scores on these tests at the grade 10 level than did the late-entry immersion group. These results are presented in Table 4.14, along with those for three Ottawa groups in the bilingual program for comparative purposes. Since the groups are small and possibly different from those in succeeding years, these results should be viewed with caution and no conclusions drawn until further data are available.

TABLE 4.14

FRENCH PROFICIENCY RESULTS ON IEA TESTS FOR OTTAWA GRADE 10 SPECIAL FRENCH AND BILINGUAL-PROGRAM GROUPS, SPRING 1980

Group	IEA IVS Listening			IEA IVS Reading			IEA IV Writing		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
Special French									
From late-entry, 2 French courses	22.3	4.2	13	18.1	4.1	15	21.9	7.8	16
From primary-entry, 4 French courses	31.8	3.3	12	29.4	4.4	13	34.2	3.6	12
Bilingual-program									
Grade 7 entry	22.6	6.6	21	21.8	6.6	22	26.8	8.3	22
Grade 6 entry	24.3	3.6	43	22.4	5.5	66	26.1	5.0	67
From French-language schools	29.0	4.9	18	27.8	5.0	20	32.4	5.1	20

Grade 12 Bilingual Program, 1980

IEA test results. Grade 12 students in Ottawa and Carleton bilingual high schools took the IEA IVS Reading and IEA IV Writing tests described earlier. At this level, the Ottawa group included students who had entered an immersion or bilingual program from a core French program at the grade 6, 7 and 9 levels. Table 4.15 presents results for these three groups, as well as for the Carleton grade 7 entry group and an Ottawa group from French-language schools. Among the five groups tested at the grade 12 level in the bilingual program in Ottawa and Carleton, differences in mean scores on the reading test did not reach significance. However, the group from French-language schools did score significantly higher than both Ottawa grade 6 and grade 9 entry groups on the writing test, which involved a knowledge of grammar and language usage.

TABLE 4.15

GRADE 12 FRENCH PROFICIENCY RESULTS: IEA TESTS
FOR FIVE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1980

Group	IEA IVS Reading			IEA IV Writing		
	Mean	SD	N	Mean	SD	N
Grade 9 entry, Ottawa (2445 hours)	22.4	5.1	10	27.1	5.9	9
Grade 7 entry, Carleton (2925 hours)	24.3	5.1	15	30.9	6.8	19
Grade 7 entry, Ottawa (3105 hours)	25.7	5.0	39	29.1	5.0	37
Grade 6 entry, Ottawa (3945 hours)	24.4	5.2	13	26.8	6.0	11
From French-language schools	28.0	5.2	23	34.3*	3.8	18

* Mean for this group is significantly greater than those for both Ottawa grade 6 and grade 9 entry groups (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

Both of these IEA tests were used with these same students in grade 9 and grade 10, in the spring of 1977 and 1978, respectively. Small groups of students have complete sets of reading or writing scores; their results are shown in Table 4.16 and graphically in Figures 4.1 and 4.2. It will be observed that all groups show steady increases over this period.

TABLE 4.16

GRADE 9, 10 AND 12 FRENCH PROFICIENCY RESULTS: IEA TESTS
FOR THREE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, 1977-1980

Group		IEA IVS Reading			IEA IV Writing		
		Mean	SD	N	Mean	SD	N
Grade 7 entry, Carleton	grade 9	19.9	4.5	14	26.1	8.2	19
	grade 10	24.1	4.5	14	28.9	5.6	19
	grade 12	24.6	5.2	14	30.9	6.8	19
Grade 7 entry, Ottawa	grade 9	18.3	5.0	23	19.5	6.6	33
	grade 10	22.4	5.4	23	27.2	6.0	33
	grade 12	26.8	4.2	23	28.7	4.8	33
From French-language schools	grade 10	26.3	5.0	19	30.8	4.2	15
	grade 12	28.3	4.7	19	34.4	3.9	15

FIGURE 4.1

IEA IVS FRENCH READING RESULTS
FOR THREE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, 1977-1980

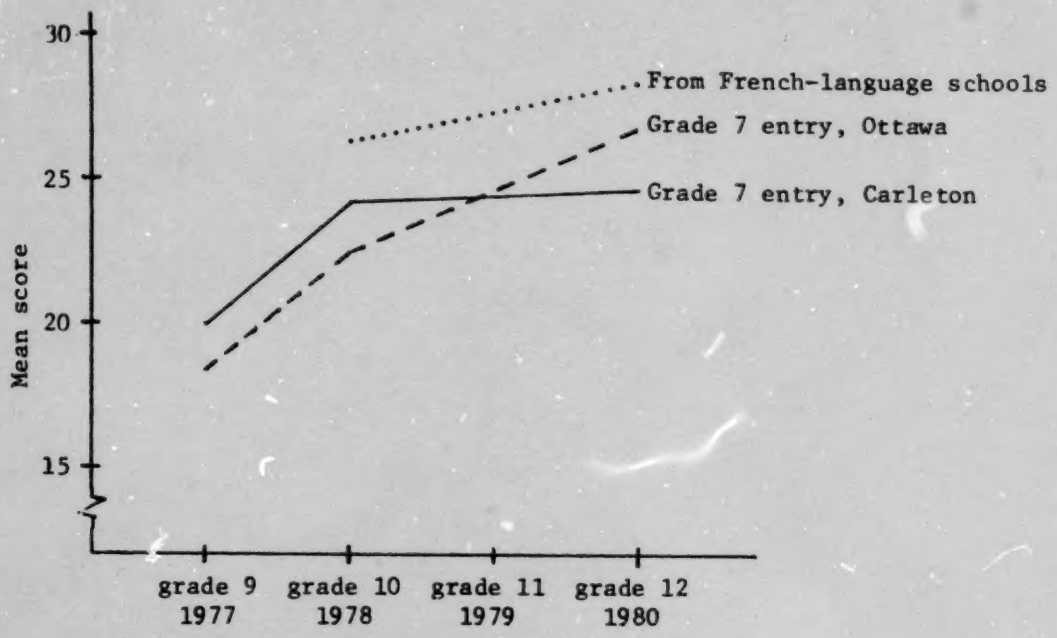
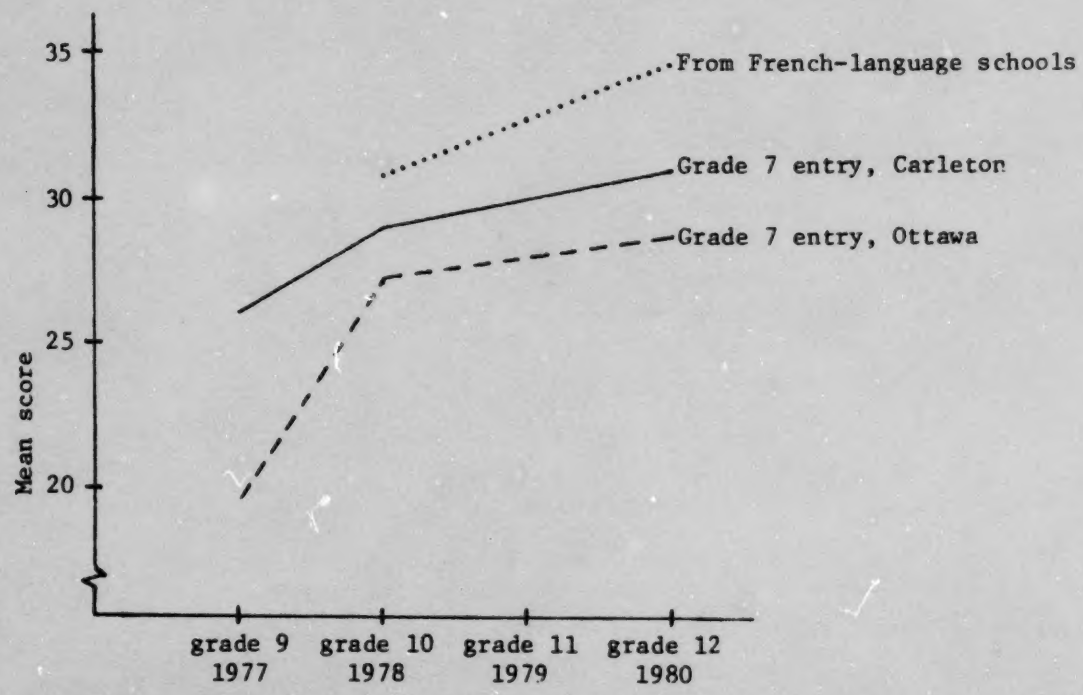


FIGURE 4.2

IEA IV FRENCH WRITING RESULTS
FOR THREE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, 1977-1980



Grade 12 performance on the IEA tests in the spring of 1980 is compared with that of previous grade 12 groups of similar background in Table 4.17 below. It will be remembered that groups completing the full Ottawa late-entry immersion program did not exist prior to 1979-80. For the small group which entered a bilingual program in grade 9, the 1980 scores are lower than those of previous groups following this program, but it is also the case that the number of students choosing this option is decreasing, since most students now have the opportunity to join a bilingual program earlier.

TABLE 4.17

GRADE 12 FRENCH PROFICIENCY RESULTS: IEA TESTS
FOR BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, 1977-1980

Group		IEA IVS Reading			IEA IV Writing		
		Mean	SD	N	Mean	SD	N
Grade 9 entry, Ottawa	1980	22.4	5.1	10	27.1	5.9	9
	1979	not available			29.5	5.4	22
	1978	27.2	6.1	39	30.6	7.0	37
	1977	27.0	5.5	32	29.5	6.1	34
Grade 7 entry, Carleton	1980	24.3	5.1	15	30.9	6.8	19
	1979	not available			30.0	6.2	29
Grade 7 entry, Ottawa	1980	25.7	5.0	39	29.1	5.0	37
	1979	not available			31.0	8.0	14
From French-language schools	1980	28.0	5.2	23	34.3	3.8	18
	1979	not available			34.9	4.8	15
	1977	31.8	4.2	10	34.7	3.6	11

Test de français IV. Table 4.18 gives the grade 12 results on the three subsections (Paragraphes à compléter, Vocabulaire and Orthographe) of the Part 3 of the Test de français, Secondaire IV. On the test as a whole, the Carleton Board group achieved a significantly higher mean score than all the other groups. Some of the variation in performance may be the result of several students having had insufficient time to complete the whole test.

TABLE 4.18

GRADE 12 FRENCH PROFICIENCY RESULTS: TEST DE FRANCAIS IV, PART 3, FOR FIVE BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1980

Group	Paragraphes		Vocabulaire		Orthographe		N
	Mean	SD	Mean	SD	Mean	SD	
Grade 9 entry, Ottawa (2445 hours)	6.0	1.9	6.8	2.7	9.6	2.8	10
Grade 7 entry, Carleton (2925 hours)	7.6	2.7	8.1	2.5	14.0	3.7	20
Grade 7 entry, Ottawa (3105 hours)	6.7	2.6	7.8	2.7	11.1	4.4	37
Grade 6 entry, Ottawa (3945 hours)	6.3	2.2	6.8	3.0	9.5	4.8	13
From French-language schools	6.2	2.2	7.0	3.0	11.7	5.8	23

When the mean scores shown in Table 4.18 are compared with the norms for Quebec francophone students in their fourth year of secondary school, as shown in Table 4.19, it can be seen that, relative to these norms, all grade 12 groups are performing at the 25th to 40th percentile on the first two subtests, and slightly lower on the third.

TABLE 4.19

NORMATIVE DATA FOR TEST DE FRANCAIS IV,
PROVINCE OF QUEBEC FRANCOPHONE NORMS, 1975-76

Raw score	Percentile		
	Paragraphes	Vocabulaire	Orthographe
1	1	1	0
2	2	2	1
3	5	3	1
4	9	7	2
5	16	12	3
6	26	20	4
7	38	30	6
8	51	42	9
9	64	54	12
10	76	67	16
11	85	78	21
12	92	86	27
13	96	92	33
14	98	96	40
15	99	98	47
16			54
17			61
18			68
19			74
20			80
21			85
22			88
23			92
24			94
25			96
26			97
27			98
28			99
29			99
30			100

Test de mots à trouver (Cloze test). The mean scores for the grade 12 bilingual program groups on the Test de mots à trouver are shown in Table 4.20. The Ottawa grade 9 entry group scored significantly lower than the two grade 7 entry groups and the group from French-language schools. This table also includes results for other groups described earlier in this report.

TABLE 4.20

TEST DE MOTS A TROUVER RESULTS FOR BILINGUAL-PROGRAM, SPECIAL FRENCH AND IMMERSION GROUPS, GRADES 8, 10 AND 12, SPRING 1980

Group	Test de mots à trouver		
	Mean	SD	N
Grade 12 Bilingual-Program Groups, 1980			
Grade 9 entry, Ottawa	18.9	3.3	9
Grade 7 entry, Carleton	23.2	4.6	19
Grade 7 entry, Ottawa	22.8	3.3	37
Grade 6 entry, Ottawa	20.4	5.3	11
From French-language schools	23.9	3.9	18
Grade 10 Bilingual-Program Groups, 1980			
Grade 7 entry, Ottawa	19.2	4.8	22
Grade 7 entry, Carleton	21.0	3.5	58
Grade 6 entry, Ottawa	20.3	3.6	67
From French-language schools	22.4	5.5	20
Grade 10 Special French Group, 1980			
Students taking French 1S, 2S, Histoire and Géographie	23.2	3.5	24
Grade 8 Immersion Groups, 1980			
Late-entry, Carleton	17.1	3.8	139
Late-entry, Ottawa	17.1	4.1	112
Primary-entry, Carleton	19.9	3.5	54
Primary-entry, Ottawa	19.3	3.8	139

When grade 10 and grade 12 groups entering a bilingual or immersion program at the same grade level are compared, it can be seen that grade 12 means are all higher than the corresponding ones for grade 10, but the difference is significant only for the two grade 7 entry groups. The means for grade 12 students who entered a bilingual program in grade 7 are approaching that of the grade 10 special French group at School A,

consisting mainly of graduates of Ottawa primary-entry immersion, and are higher than those of the two grade 8 primary-entry immersion groups from 1980. The grade 12 means for the grade 6 and grade 9 entry groups are close to those for the same primary-entry groups.

Aptitude tests. On entering high school in the fall of 1976, the grade 12 bilingual-program students in the Ottawa Board did the Verbal Reasoning and Abstract Reasoning subtests of the DAT. Scores are not available for the Carleton Board students, nor for most students entering the Ottawa bilingual high schools from French-language schools. Means for the other three grade 12 subgroups are presented in Table 4.21; differences between groups are not significant. It will also be observed that the groups tend to be small and hence not likely to be similar to the larger groups which will follow in the regular grade 6 or grade 7 entry programs in later years.

TABLE 4.21

RESULTS OF GRADE 9 ABILITY MEASURES
FOR OTTAWA GROUPS IN GRADE 12 OF BILINGUAL HIGH SCHOOLS, SPRING 1980

Group	DAT Verbal Reasoning			DAT Abstract Reasoning		
	Mean	SD	N	Mean	SD	N
Grade 9 entry, Ottawa	32.0	5.8	10	38.4	7.9	10
Grade 7 entry, Ottawa	28.8	7.4	42	36.7	5.7	42
Grade 6 entry, Ottawa	28.8	9.4	12	40.1	5.8	12

Relationships among French Proficiency and Ability Scores

For each of the five bilingual-program groups at the grade 10 level in Ottawa and Carleton, correlations were calculated between pairs of French proficiency scores, that is, the three IEA tests of listening, reading and writing, the Test de français and the cloze test. These correlations are given in Table 4.22. The cloze test,

TABLE 4.22

CORRELATIONS AMONG FRENCH PROFICIENCY SCORES FOR FIVE GRADE 10 BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1980

Group and test	IEA IVS List.		IEA IVS Read.		IEA IV Writ.		Français	
	r	N	r	N	r	N	r	N
Grade 7 entry, Ottawa								
IEA IVS Reading	0.87	15	-		-		-	
IEA IV Writing	0.68	15	0.78	22	-		-	
Test de français	0.57	15	0.70	22	0.57	22	-	
Mots à trouver	0.55	15	0.68	22	0.39	22	0.79	22
Grade 7 entry, Carleton								
IEA IVS Reading	0.67	56	-		-		-	
IEA IV Writing	0.40	57	0.57	58	-		-	
Test de français	0.62	56	0.73	55	0.70	56	-	
Mots à trouver	0.61	56	0.65	57	0.53	58	0.74	55
Grade 6 entry, Ottawa								
IEA IVS Reading	0.57	40	-		-		-	
IEA IV Writing	0.42	41	0.41	66	-		-	
Test de français	0.47	42	0.56	64	0.33	65	-	
Mots à trouver	0.37	41	0.45	66	0.45	67	0.52	65
From English-language separate schools								
IEA IVS Reading	insufficient		-		-		-	
IEA IV Writing	number		0.59	30	-		-	
Test de français	of		0.75	30	0.74	30	-	
Mots à trouver	cases		0.69	30	0.62	30	0.69	30
From French-language schools								
IEA IVS Reading	0.84	13	-		-		-	
IEA IV Writing	0.92	13	0.85	19	-		-	
Test de français	0.82	14	0.79	20	0.81	20	-	
Mots à trouver	0.75	13	0.68	19	0.71	20	0.56	20

which has been found to correlate highly with written skills, has substantial correlations with the other tests, including listening comprehension; its highest correlation tends to be with the Test de français.

For the grade 6 and grade 7 entry groups it was also possible to calculate correlations between scores obtained in grade 8 and those obtained in grade 10 on French listening comprehension, reading and writing tests. Table 4.23 presents these correlations.

TABLE 4.23

CORRELATIONS BETWEEN GRADE 8 AND GRADE 10 FRENCH PROFICIENCY SCORES FOR THREE GRADE 10 BILINGUAL-PROGRAM GROUPS, OTTAWA AND CARLETON, SPRING 1980

Group	Listening		Reading		Writing	
	r	N	r	N	r	N
Grade 7 entry, Ottawa	0.51	13	0.88	19	0.79	19
Grade 7 entry, Carleton	0.52	57	0.79	58	0.78	58
Grade 6 entry, Ottawa	0.23	33	0.60	45	0.52	45

For the four Ottawa groups, correlations are shown in Table 4.24 between each of the four ability scores from the beginning of grade 9 and each of the five measures of French proficiency obtained in the spring of 1980. For the two larger groups, those entering immersion at grade 6 and those who came from English-language separate schools, the correlations with the two verbal ability tests ranged from 0.32 to 0.57, with one exception. In the same two groups, correlations of the French proficiency scores with those on the DAT Numerical Ability and Abstract Reasoning were between 0.10 and 0.39, except for two negative values and one correlation of 0.48.

TABLE 4.24

CORRELATIONS BETWEEN ABILITY AND FRENCH PROFICIENCY SCORES FOR FOUR GRADE 10 BILINGUAL-PROGRAM GROUPS, OTTAWA, SPRING 1980

Group and test	Henmon-Nelson		DAT-Verbal Reasoning		DAT-Numerical Ability		DAT-Abstract Reasoning	
	r	N	r	N	r	N	r	N
Grade 7 entry, Ottawa								
IEA IVS Listening	0.58	15	0.54	15	0.47	15	insuff.data	
IEA IVS Reading	0.71	21	0.55	22	0.58	22	0.64	15
IEA IV Writing	0.58	21	0.26	22	0.56	22	0.47	15
Test de français	0.80	21	0.62	22	0.50	22	0.52	15
Mots à trouver	0.78	21	0.82	22	0.46	22	0.67	15
Grade 6 entry, Ottawa								
IEA IVS Listening	0.23	40	0.37	41	0.11	41	0.28	31
IEA IVS Reading	0.38	57	0.38	63	0.31	63	0.15	54
IEA IV Writing	0.35	57	0.46	64	0.48	64	0.34	55
Test de français	0.32	57	0.57	65	0.32	65	0.14	55
Mots à trouver	0.50	57	0.56	64	0.33	64	0.39	55
From English-language separate schools								
IEA IVS Reading	0.50	30	0.49	30	0.18	30	0.22	27
IEA IV Writing	0.41	30	0.47	30	0.30	30	0.22	27
Test de français	0.46	30	0.51	30	0.10	30	0.32	27
Mots à trouver	0.46	30	0.53	30	-0.15	30	-0.15	27
From French-language schools								
IEA IVS Listening	0.22	11	0.14	11	0.50	11	insuff.data	
IEA IVS Reading	0.50	16	0.54	16	0.35	16	-0.02	14
IEA IV Writing	0.32	16	0.42	16	0.40	16	0.10	14
Test de français	0.38	17	0.40	17	0.34	17	0.21	15
Mots à trouver	0.39	16	0.50	16	0.48	16	-0.09	14

It was not possible to obtain similar intercorrelations for sub-groups in grade 10 special French or in grade 12, since the number of cases in each group tended to be small.

SUMMARY

This chapter reports on several aspects of French proficiency of grade 10 and 12 students in bilingual high school programs in Ottawa and Carleton, as well as grade 10 students in a special French-language course for graduates of elementary immersion programs. Of particular interest were groups which had experienced the complete late-entry programs in Ottawa and Carleton. The 1980 grade 12 group in Ottawa was the first cohort of late-entry graduates to reach that level. Measures of French reading, writing and language were obtained for all high school groups and, in addition, listening comprehension was tested at the grade 10 level.

Grade 10 Bilingual-Program Results

Differences among the grade 10 bilingual-program groups tended not to be statistically significant, except that the group from French-language schools, not surprisingly, scored higher than the other groups. Among the three grade 6 or 7 entry groups, the only significant difference was found with the listening test where the Ottawa grade 6 entry group scored higher than the Carleton grade 7 entry group. All three grade 6 or 7 entry groups had higher means on the French writing test than they had had on the same test at the end of their grade 8 year. Means of the Ottawa grade 6 and entry groups on the tests of listening, reading and writing were similar to those of the grade 10 groups of similar backgrounds tested in 1978 and 1977.

No significant differences were found among grade 10 bilingual-program groups on a French cloze test nor on a test prepared for Quebec francophone students. On both of these tests, mean scores for the grade 10 groups were similar to those of grade 8 primary-entry

immersion groups tested in the spring of 1979. On the Quebec test, most grade 10 groups scored at the 6th stanine relative to the Quebec francophone norms for students in their first year of secondary school.

For the five grade 10 bilingual-program groups, product-moment correlations between pairs of French proficiency scores were computed, as well as correlations between French proficiency and ability measures. The cloze test has been found to correlate highly with measures of written skills and in over half of these comparisons the correlations with the other tests were 0.60 or more. Correlations between grade 8 and grade 10 scores on French reading and writing tests were also substantial, while those for listening comprehension tended to be lower. Correlations between French proficiency and verbal ability scores for the two larger grade 10 subgroups were generally 0.55 or below, while those involving the nonverbal measures were slightly lower.

Grade 10 Special French Results

At one Ottawa high school, special French-language courses at the grade 9 and 10 levels have been established, primarily for graduates of the primary-entry immersion program from one elementary school. Students were also able to take Geography and History in French at the grade 9 and 10 levels, respectively. At two other Ottawa high schools, special French courses were available at the grade 9 and 10 levels, established primarily for graduates of late-entry immersion. Although these groups were rather small, it appeared that differences among the schools were greater than those between the two groups at the one school where it had been possible to take either two or four French courses in grades 9 and 10.

Grade 12 Bilingual-Program Results

At the grade 12 level, the Ottawa bilingual-program group included students who had entered an immersion or bilingual program from a core French program at the grade 6, 7 and 9 levels. In addition, the sample included a small group of Carleton students who had graduated from the late-entry immersion program in their board and had followed a program with about 30 per cent of the instruction in French in grades 9 through 12. Differences among these four groups on the French reading and writing tests were not significant. However, a group from French-language schools did have a significantly higher mean score on the writing test than the four other groups. For grade 7 entry groups from Ottawa and Carleton, grade 9, 10 and 12 results showed steady increases in reading and writing proficiency over this period.

On a test designed for Quebec francophone students in their fourth year of secondary school, the grade 12 groups performed at the 25th to 40th percentile relative to the norming group on two of the subtests and slightly lower on a third subtest.

On the cloze test, which provides a single measure of several aspects of French proficiency, means at the grade 12 level for two Ottawa groups were similar to the mean for the Ottawa grade 8 primary-entry group tested in spring 1980, while the two grade 12 groups who entered immersion at the grade 7 level scored significantly higher than the grade 10 groups of similar background.

The results of testing French proficiency at the grade 10 and grade 12 levels tend to show a lack of differences among the groups which began their programs at grade 6, 7 or 9. These groups had made steady progress in the areas tested during their years in the intermediate and senior grades. There is as yet no evidence which can be used to compare primary- and late-entry students at the same grade level, but in a few instances late-entry students at the grade 10 or 12 level obtained scores similar to those of primary-entry students at the grade 8 level.

Chapter Five

FRENCH PROFICIENCY AND GENERAL ACHIEVEMENT OF GRADE 8 STUDENTS IN PRIMARY- AND LATE-ENTRY IMMERSION

Carleton and Ottawa, Spring 1980

INTRODUCTION: PROGRAMS AND STUDENT GROUPS

In the 1979-80 school year, the enrolment in primary-entry immersion classes at the grade 8 level reached a total of nearly 240 in the schools of the Ottawa and Carleton Boards. This represented 9 per cent of the total grade 8 population in Ottawa and almost 3 per cent in Carleton. These numbers refer to actual enrolment at the specified grade level and do not identify students who entered the program later or who did not progress at the expected rate. About two thirds of this grade 8 immersion group had entered a senior kindergarten class in the immersion program in Ottawa or Carleton in the fall of 1971 and hence formed part of the K-71 cohort, whose progress through the grades had been followed each year. Enrolment in primary-entry immersion was about 13 per cent of the total senior kindergarten enrolment in Ottawa and about 5 per cent in Carleton in 1971-72. Chapter Six will give additional information about the progress of this group, referred to as the K-71 cohort, while Table 5.1 shows the actual enrolment in primary-entry immersion classes in grades 6 to 8 in Ottawa and Carleton from 1977 to 1979.

For several years, students in both boards have been able to enter a late immersion sequence, beginning at the grade 6 level in Ottawa and at grade 7 in Carleton. In Ottawa, enrolment in these courses was at a maximum in the 1976-77 school year and then began to decrease as the primary-entry immersion students reached these grade

TABLE 5.1

ENROLMENT IN PRIMARY-ENTRY IMMERSION IN GRADES 6 TO 8,
OTTAWA AND CARLETON, 1977-1980

Grade and Board	1977-78	1978-79	1979-80
Grade 6			
Ottawa	195	220	224
Carleton	71	157	330
Grade 7			
Ottawa	93	190	204
Carleton	78	78	219
Grade 8			
Ottawa	30	94	173
Carleton	-	73	66

TABLE 5.2

ENROLMENT IN LATE-ENTRY IMMERSION IN GRADES 6 TO 8,
OTTAWA AND CARLETON, 1977-1980

Grade and Board	1977-78	1978-79	1979-80
Grade 6			
Ottawa	169	113	128
Grade 7			
Ottawa	231	172	128
Carleton	198	175	173
Grade 8			
Ottawa	264	200	145
Carleton	146	178	160

levels. Table 5.2 shows the enrolment in late-entry immersion in grades 6 to 8 for the two boards during the three-year period ending in 1980. In 1979-80 the late-entry students at the grade 8 level were about 8 per cent of the Ottawa population at this grade level and 6 per cent in Carleton.

By the end of grade 8 the primary-entry immersion students in both Ottawa and Carleton had received well over 5000 hours of instruction in French, while those in the late-entry programs had accumulated less than half of this amount. The 1979-80 grade 8 late-entry group in Ottawa was the first one in Ottawa to have had 40 minutes of daily French instruction in grades 1 through 5, while the Carleton Board students at the same level had received a 20-minute daily program in these grades and 40 minutes per day in grade 6. Table 5.3 depicts the daily time allotment for French instruction from kindergarten to grade 8 within the typical primary- and late-entry program in each board for the period from 1971 to 1980. In the 1979-80 school year students in grades 1 to 5 began to have 40 minutes of French daily in the Carleton Board, but this change did not affect the students whose results are being considered in this report.

The grade 8 students tested in the spring of 1980 included students from both primary- and late-entry immersion in both boards. Data are given only for students who had been in primary-entry programs at least three years and those who had been in a late-entry program since its beginning at grade 6 or 7. These students took several tests of French proficiency as well as tests of academic ability and of achievement in other subject areas. In addition, a comparison group of about 400 students in each board took tests of achievement

TABLE 5.3

AMOUNT OF FRENCH INSTRUCTION FROM KINDERGARTEN TO GRADE 8 IN PRIMARY- AND LATE-ENTRY IMMERSION PROGRAMS, OTTAWA AND CARLETON, 1971-1980

Grade level	Primary-entry		Ottawa late-entry		Carleton late-entry	
	Time in French	Cumulative hours	Time in French	Cumulative hours	Time in French	Cumulative hours
K	100%	450	20%	90	10%	45
1	100%	1350	13%	210	7%	105
2	80%	2070	13%	330	7%	165
3	80%	2790	13%	450	7%	225
4	80%(75%)†	3510	13%	570	7%	285
5	80%(65%)†	4230	13%	690	7%	345
6	50%	4680	100%	1590	13%	465
7	50%	5130	50%	2040	80%	1185
8	50%	5580	50%	2490	80%	1905

† In grades 4 and 5 the proportion of time in French in the Carleton primary-entry program was 5 or 15 per cent less than that in Ottawa, reducing the total number of hours to the end of grade 8 by about 180 hours.

or skills in subject areas other than French, as well as tests of academic ability. Since the analysis of the results of the comparison groups is not yet complete, these results will not be presented in this report. Table 5.4 shows the number of students and of schools involved in each subsample from the two boards.

TABLE 5.4

NUMBER OF SCHOOLS AND STUDENTS IN 1980 GRADE 8 IMMERSION SUBSAMPLES, OTTAWA AND CARLETON

Group	Ottawa		Carleton	
	No. of students	No. of schools	No. of students	No. of schools
Primary-entry	175	7	65	2
Late-entry	140	6	160	3

INSTRUMENTS

Tests of French Proficiency

Several tests were used in the spring of 1980 to investigate various aspects of students' proficiency in French. Since listening comprehension had been extensively investigated in previous years, it was decided to concentrate on other aspects of French proficiency. One of the measures used had been prepared for use with francophone students in the first year of secondary school in Quebec. Two others had been developed by staff of the Bilingual Education Project of the Ontario Institute for Studies in Education (Andrew, Lapkin and Swain, 1978), and a fourth by the International Association for the Evaluation of Educational Achievement (IEA) under the direction of J.B. Carroll (1975).

Three of these tests, IEA IV French Reading, Test de mots à trouver (Niveau D) and Test de français (Secondaire I) were also used with grade 10 and 12 students in the bilingual high schools. They were described in the previous chapter. In a fourth test, Composition française, the student is given 20 minutes to write a short composition on a given subject. Measures obtained from this test were the total number of words written, the average sentence length, and the number of errors per 100 words.

In addition, since speaking tests had not been administered to immersion students for several years, it was considered essential to include such a test in the battery used with immersion groups at the grade 8 level in the spring of 1980. The test used for this purpose was an individual oral interview test based on one used by the New Brunswick Department of Education and derived from one used by the

U.S. Foreign Service Institute. The final score on this test is not a total score indicating the number of correct responses, but rather a rating based on a total evaluation of the candidate, using a scale representing different levels of competence. The function of the interview is to lead the examinee, though well thought out procedures and in a relatively short period of time, to use the language sufficiently to allow the tester to identify accurately the level of competence on a five-point scale. Details of samples and scoring procedures will be given in the section describing the results of this test.

Aptitude and Achievement Measures

A large battery of aptitude and achievement tests was administered to students at the grade 8 level in late- and primary-entry immersion classes in the spring of 1980, as well as to comparison groups in the English program in both boards. This battery included three ability measures, tests of language, mathematics and study skills, and measures of English reading and writing. Additional details about each of these measures are given below.

Differential Aptitude Test (DAT). Included among the aptitude measures were three subtests of the Differential Aptitude Tests (Bennett et al, 1974). Form L of this test had been given as part of the city-wide testing program in Ottawa. This form was given as a make-up test to some Carleton Board students, but Form S was already available for other students in that board. It was therefore necessary to convert the Form S scores to equivalent Form L scores, using the conversion tables in the 1974 manual.

The subtests of the DAT administered to grade 8 students were Verbal Reasoning (VR), consisting of 50 multiple-choice items using

verbal analogies; Numerical Ability (NA), in which students are asked to perform a variety of arithmetical computations, with few words being used; and Abstract Reasoning (AR), a 50-item figural reasoning test in which respondents must infer a rule or principle from a series of pictures.

Canadian Tests of Basic Skills (CTBS). The achievement measures included several subtests of the Canadian Tests of Basic Skills, Level 14, Form 4M (King, 1977), a Canadian adaptation of the Iowa Tests of Basic Skills (Lindquist and Hieronymus, 1971). Since reading skills had been tested on several occasions in previous years and the proposed test battery was already very long, it was decided not to administer the Vocabulary and Reading Comprehension tests of the CTBS. However, the Language, Study Skills and Mathematics tests from this battery were included in the spring 1980 testing.

The Language section includes subtests in Spelling (L1: 48 items), Capitalization (L2: 44 items), Punctuation (L3: 44 items) and Usage (L4: 32 items). The three subtests of the Work-Study Skills test are Map Reading (W1: 42 items), Graphs and Tables (W2: 28 items), and Reference Materials (W3: 59 items). The Mathematics test is divided into two parts: Concepts (M1: 48 items) and Problem Solving (M2: 32 items).

Gates-MacGinitie Reading Test. For students in Ottawa, grade 8 scores on the Gates-MacGinitie Reading Test, Survey E, Form 1M, (Gates and MacGinitie, 1965) were available and were included in the data used for analysis. The Vocabulary section of this test is a 50-item multiple-choice test based on a series of stimulus words which are arranged in order of difficulty. In the Comprehension test there

are several short passages with two or three words missing and students are to choose the best of five given alternatives to complete each blank.

English Story Completion Test (Level C). This is the English-language equivalent of the French cloze test, Test de mots à trouver, which was described earlier. The exact-word method of scoring was also used in this case.

English Composition Test. In this test, 20 minutes were allowed for the student to write a short composition in English on a given subject. As with the French version of this test, the measures obtained included overall number of words, average sentence length and number of errors per 100 words. A count was also obtained of the number of adjectives, adverbs and prepositions as indirect indications of the complexity of sentence structure in the written work produced. Since obtaining these counts is a very time-consuming process, it was decided to obtain scores for a sample of approximately 50 students from each program group; this sample consisted of all the students from the Carleton primary-entry group and one third to one half of the other groups.

FRENCH PROFICIENCY RESULTS

French Reading and Writing Tests

The results presented in this section compare French proficiency in reading and language for primary- and late-entry immersion students in the Ottawa and Carleton boards. Analyses of French writing skills for these groups are also included.

French reading and language: primary-entry groups. Table 5.5 shows the results of three tests in French reading or language. The only one of these tests on which there was a significant difference in the mean scores between the two primary-entry groups was on the Test de français, where the Carleton group performed significantly better than the Ottawa one. This finding differs from that of the grade 8 results of the previous year when the Carleton primary-entry group performed consistently and significantly better on tests of a similar nature (Morrison, 1979).

TABLE 5.5

FRENCH PROFICIENCY OF PRIMARY-ENTRY† GRADE 8 IMMERSION GROUPS: READING AND LANGUAGE SKILLS, OTTAWA AND CARLETON, SPRING 1980

Test and group	Mean	SD	N
IEA IV French Reading			
Carleton primary-entry	30.8	3.8	53
Ottawa primary-entry	29.7	4.5	145
Test de mots à trouver			
Carleton primary-entry	19.9	3.5	53
Ottawa primary-entry	19.3	3.8	141
Test de français			
Carleton primary-entry	23.3*	4.5	54
Ottawa primary-entry	20.6	4.5	139

† Cumulative time in French is about 5580 hours

* Mean of this group significantly greater than that of the other group (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

French reading and language: late-entry groups. The results on the three tests for the late-entry students in both the Ottawa and Carleton boards are presented in Table 5.6. No significant differences were found between the mean scores of the groups for any of these tests. In the previous year the findings were similar, with the only significant difference in favour of the Carleton group on a French listening comprehension test which was not administered in the spring of 1980.

TABLE 5.6

FRENCH PROFICIENCY OF LATE-ENTRY† GRADE 8 IMMERSION GROUPS: READING AND LANGUAGE SKILLS, OTTAWA AND CARLETON, SPRING 1980

Test and group	Mean	SD	N
IEA IV French Reading			
Carleton late-entry	24.4	4.9	139
Ottawa late-entry	25.6	5.0	119
Test de mots à trouver			
Carleton late-entry	17.1	3.8	141
Ottawa late-entry	17.1	4.1	114
Test de français			
Carleton late-entry	17.7	4.5	139
Ottawa late-entry	18.2	5.0	112

† Cumulative time in French for the Carleton group is about 1905 hours, and for the Ottawa group about 2490 hours.

When Tables 5.5 and 5.6 are examined together, it will be seen that, as in the year before, in both boards the primary-entry immersion group performed significantly better on all the measures than the late-entry group ($p < 0.05$). This finding is not surprising in view of the very different amounts of instructional time in French that the two types of students have experienced by the end of grade 8. Results on the Test de français for the groups can also be compared with the norms

for Quebec francophone students at the Secondaire I level which were given in Table 4.8 of Chapter Four. It will be important to examine relative achievement as these groups progress through high school.

French writing skills: primary- and late-entry groups. The Composition française test described earlier required the students to write a short composition in French on a specific subject. For each composition a count was made of the number of words and sentences written and the number of errors made. Errors noted included incorrect word choice, wrong gender, spelling mistakes, anglicisms, errors of gender or number agreement, verb errors and word omissions. A specific mistake was counted as an error only once. Table 5.7 gives results of the three tabulations obtained from this test for each of the four groups.

For the two primary-entry groups there was no significant difference in the mean scores on the three measures obtained for the compositions. Although the late-entry groups wrote compositions with no significant differences in either total or sentence length, the Carleton group had a significantly smaller percentage of errors than did the Ottawa students. Here again, there were fewer significant differences between comparable groups in the two boards than were found in 1979.

When primary- and late-entry groups within each board were compared, it was found that both primary-entry groups wrote longer passages than the corresponding late-entry groups ($p < 0.05$) but that there was no difference in sentence length between them. In Ottawa the primary-entry group had a significantly smaller percentage of errors than the late-entry group in the same board. In the previous year it was found that the primary-entry groups had written longer sentences with fewer errors,

although the mean overall length of the compositions was not significantly different for the two groups. It is hoped that later analyses of compositions written in both French and English can include global measures of style and content as well as analytic measures like those obtained for groups tested in 1979 and 1980.

TABLE 5.7

FRENCH WRITING SKILLS OF PRIMARY- AND LATE-ENTRY GRADE 8 IMMERSION GROUPS†, OTTAWA AND CARLETON, SPRING 1980

Subtest and group	Mean	SD	N
Total length			
Primary-entry: Carleton	192.4	49.8	52
Ottawa	173.2	64.6	137
Late-entry: Carleton	141.4	44.1	142
Ottawa	141.9	58.8	114
Average sentence length			
Primary-entry: Carleton	16.7	3.4	52
Ottawa	17.8	4.6	137
Late-entry: Carleton	17.3	6.0	142
Ottawa	16.3	3.8	114
Errors per 100 words			
Primary-entry: Carleton	15.1	4.9	52
Ottawa	16.9	6.2	137
Late-entry: Carleton	17.3	6.3	142
Ottawa	19.5*	6.8	114

† Cumulative time in French for primary-entry groups is about 5580 hours, for Carleton late-entry group about 1905 hours and for Ottawa late-entry group about 2490 hours.

* Mean of this group significantly greater than that of the group in the other board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

Test of Oral Production

Scoring procedures. In this individual oral interview test, the interviews were recorded and scored later by the examiner, using the five competence levels described in Table 5.8. All of the ratings except category 5 may be modified by a plus (+) to indicate that the proficiency substantially exceeds the minimum requirements for the level but falls short of the next higher level, thus providing 11 different possible scores. Factors to be considered include accent, grammar, vocabulary, fluency and comprehension.

Since the Carleton Board had arranged for training of testers in the previous year, a group of trained testers was available. Seven of these testers participated in this study and took part in a special training session to review the scoring procedures and to practise scoring. At this session discussion of inconsistencies in scoring produced more uniform results when practice tapes were used.

In order to check the reliability of the scoring in the actual test situation, one of the testers rescored a random subsample of 35 of the original sample of 108. A Chi-square test showed no significant difference in the distributions of the two scorings of these 35 students. About 75 per cent were rated in the same category or at the category within a plus on either side of this rating; in only two cases (6 per cent) was the discrepancy greater than one level. The second marker appeared to assign somewhat lower scores than the others, since the levels assigned by him were lower in 15 of the 20 cases of disagreement.

TABLE 5.8

COMPETENCY LEVELS USED WITH ORAL INTERVIEW TEST, SPRING 1980

Level 0

No proficiency.

Level 1

Can satisfy routine travel requirements and minimum standards of courtesy. Can ask questions and respond on very familiar subjects; with limited experience in the language can understand simple questions or statements if the speaker uses slow, clear speech, repetititon and paraphrase; vocabulary inadequate for expressing other than the most basic needs; frequent errors of pronunciation and grammar but may be understood by a native of the language who is accustomed to dealing with foreigners to his language. Although basic requirements differ considerably between individuals, persons achieving Level 1 can order a simple meal, ask for shelter or lodging, ask for and receive simple road directions, do shopping and tell time.

Level 2

Can satisfy routine social and limited professional needs. Can express what is wished with assurance, but not without some difficulty, in most social situations comprising introductions and familiar conversations on most matters of current interest as well as work, family and autobiographical details; can speak with assistance of limited professional needs; can infer the essentials from most nontechnical conversations; fluent vocabulary, sufficient for roundabout expression; an accent which though intelligible contains errors; can usually handle elementary constructions with accuracy but lacks assurance in many aspects of grammar.

Level 3

Can speak the language with sufficient lexical and structural control to participate in most ordinary or official conversations on practical, social or professional subjects. Can discuss particular interests or special areas of competence with reasonable ease, shows comprehension for a normal rate of conversation; vocabulary is extended enough that the candidate is rarely at a loss for words; accent could seem entirely foreign; good use of grammar; errors never obscure meaning and rarely disturb the native speaker.

Level 4

Can use the language fluently and accurately at all levels pertinent to professional needs. Can understand and participate in all conversations within the realm of experience with a high level of ease of expression and accuracy of vocabulary; is rarely taken for a native speaker but is able to respond in an appropriate way in less familiar situations; pronunciation and grammar errors are relatively rare; can give fluent translations in both languages.

Level 5

Speaks with a facility equal to that of a knowledgeable native speaker. Total ease in the language; the way of speaking - composed of breadth of vocabulary, current expressions and pertinent cultural references - is accepted in all aspects by a well-informed native speaker.

Samples. Random samples of students were chosen from each Ottawa or Carleton school which offered a grade 8 immersion program, the number selected from each school being roughly dependent on the number of immersion classes at that grade level. A total of 108 students were tested, consisting of 39 from primary-entry immersion in Ottawa and 15 in Carleton, together with 29 and 25, respectively, from late-entry immersion. An attempt was made to ensure that the subjects chosen did not have a francophone background.

Interview test results. Table 5.9 presents the frequency distributions of scores on the interview test for the two programs in each of the two boards. It will be recalled that Table 5.8 describes the five basic competence levels used and that a plus was used to indicate a competence that seemed to fit between the two described. No students were classified below level 1 and only one primary-entry program student achieved a level higher than 3+. These results are shown graphically for each program in Figures 5.1 and 5.2. It will be seen that for the primary-entry programs, the scores in the Ottawa group had a greater range than that for Carleton, which encompassed only levels 2+, 3, and 3+. In Ottawa the greatest number of students scored at level 2, but at least 50 per cent of the students scored 2+ or more. For the late-entry programs the shapes of the distributions are more similar, with at least 50 per cent of the students reaching a level of 2 or more in Ottawa and 2+ or more in Carleton. In both cases, a Chi-square test showed the differences between the two boards to be significant. In all Chi-square tests cited it was necessary to combine various levels of achievement in order to prevent particularly small frequencies.

TABLE 5.9

ORAL INTERVIEW TEST RESULTS,
GRADE 8 PRIMARY- AND LATE-ENTRY IMMERSION,
OTTAWA AND CARLETON, SPRING 1980

Competence level	Program and Board							
	Primary-entry				Late-entry			
	Ottawa		Carleton		Ottawa		Carleton	
	Number	%	Number	%	Number	%	Number	%
1	2	5	-	-	5	17	1	4
1+	4	10	-	-	6	21	7	28
2	11	28	-	-	12	41	4	16
2+	9	23	3	20	4	14	11	44
3	4	10	6	40	2	7	1	4
3+	8	21	6	40	-	-	1	4
4	-	-	-	-	-	-	-	-
4+	1	3	-	-	-	-	-	-
TOTAL	39	100	15	100	29	100	25	100

The comparison between the results of the primary- and late-entry programs is also of interest. The differences between primary- and late-entry groups in both boards were found to be significant ($p < 0.01$). The difference in Carleton is particularly pronounced, with the primary-entry group having substantially better results than the late-entry group. All of the Carleton primary-entry students achieved at least level 2+, while almost half of the late-entry group was below this level.

FIGURE 5.1

DISTRIBUTION OF ORAL INTERVIEW TEST RATINGS,
GRADE 8 PRIMARY-ENTRY IMMERSION, OTTAWA AND CARLETON, SPRING 1980

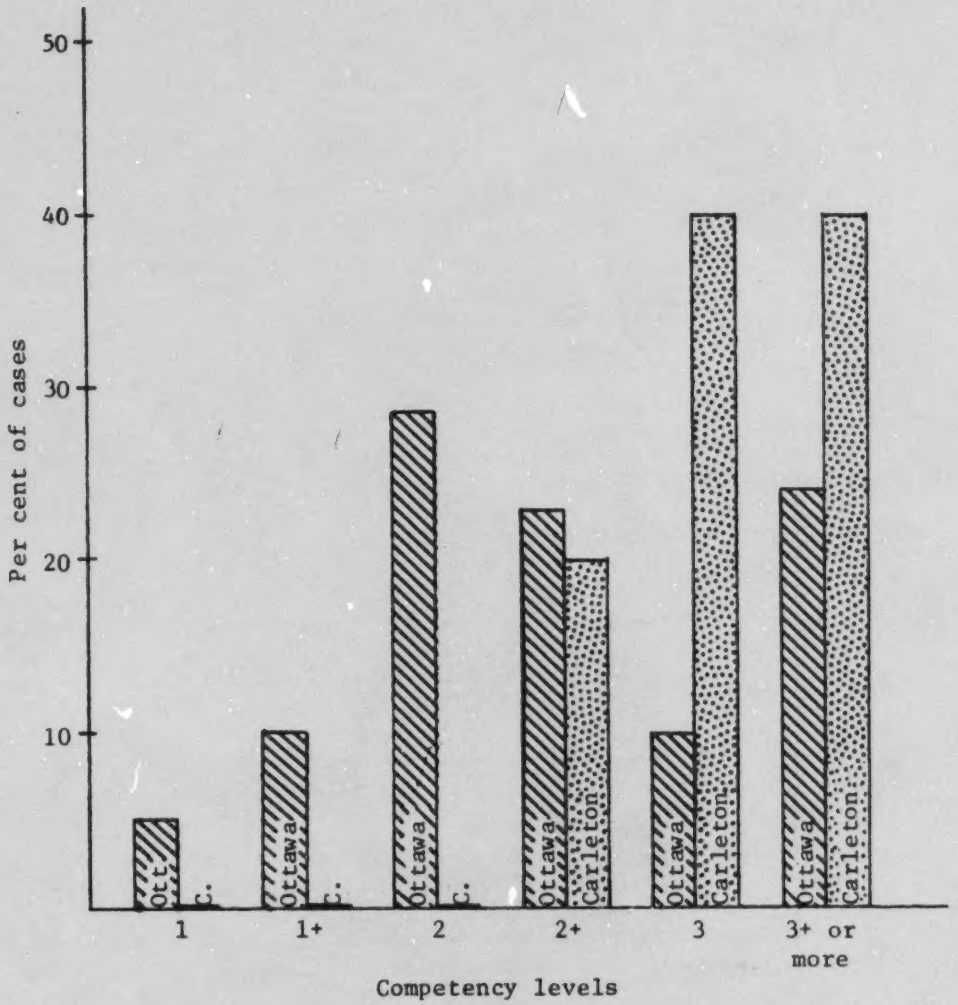
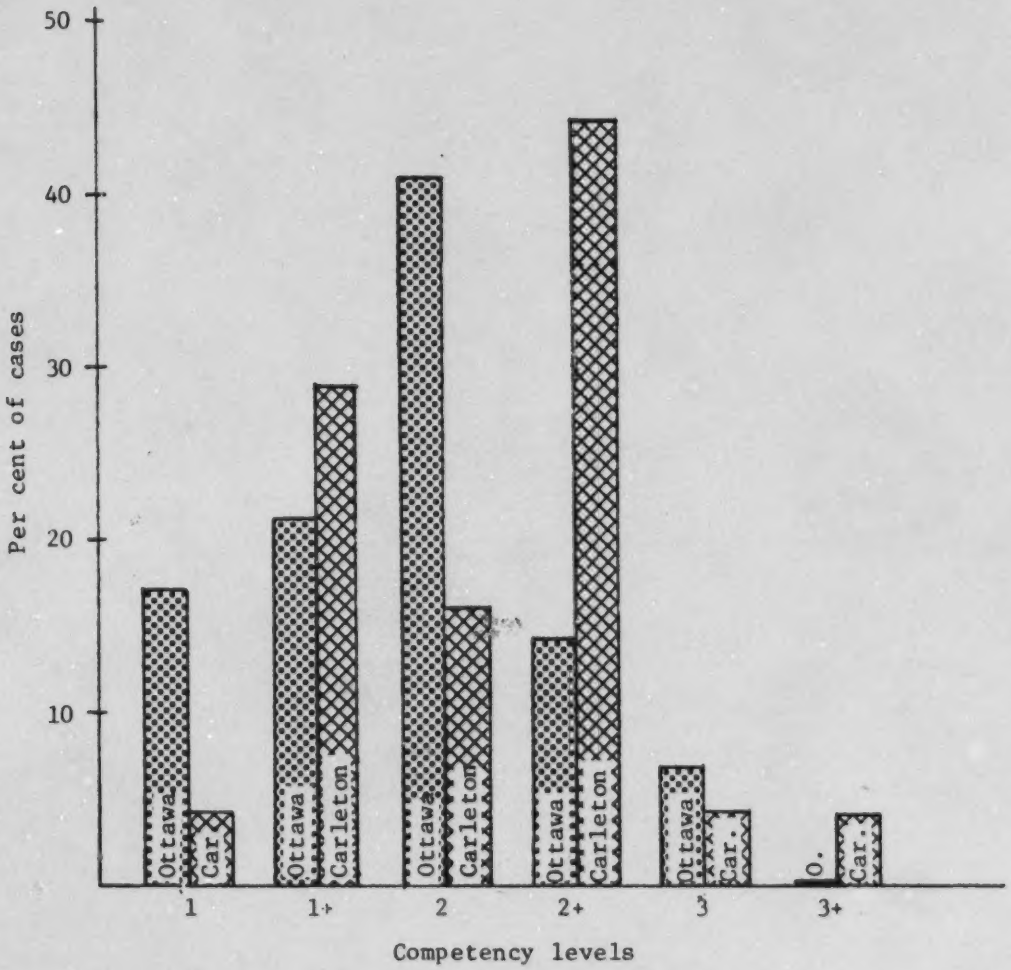


FIGURE 5.2

DISTRIBUTION OF ORAL INTERVIEW TEST RATINGS,
GRADE 8 LATE-ENTRY IMMERSION, OTTAWA AND CARLETON, SPRING 1980



APTITUDE AND ACHIEVEMENT RESULTS

Aptitude

As noted earlier, scores on the Differential Aptitude subtests in Verbal Reasoning and Abstract Reasoning were available for all students in the immersion groups and those on Numberical Ability were available for all but a couple of Carleton late-entry program classes. These results provide a good basis for comparison of ability for the various groups and are presented in Table 5.10. All scores are expressed in terms of Form L scores, using conversion tables where necessary.

TABLE 5.10

DAT RESULTS FOR GRADE 8 PRIMARY- AND LATE-ENTRY IMMERSION GROUPS, FORM L OR EQUIVALENT, OTTAWA AND CARLETON, SPRING 1980

Board and subtest	Late-entry			Primary-entry		
	Mean	SD	N	Mean	SD	N
Ottawa						
Verbal Reasoning	26.2	8.0	114	26.1	8.0	145
Numerical Ability	24.0	6.9	114	22.7	6.8	145
Abstract Reasoning	38.2	5.6	115	37.4	5.5	144
Carleton						
Verbal Reasoning	25.4	8.8	135	25.7	8.5	49
Numerical Ability	26.5#	6.5	81	23.0	6.3	49
Abstract Reasoning	38.7	5.8	137	38.0	5.5	50

Mean of this group is significantly greater than that of the other group in the same board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

This table shows no significant differences between the two primary-entry or the two late-entry groups of the two boards. Although in Ottawa no significant difference was found between the primary- and

late-entry groups, in Carleton the late-entry group performed significantly better on Numerical Ability than the primary-entry group.

In Verbal Reasoning, all the groups had a mean score which was at the 70th percentile relative to the large American sample used in the publisher's norms. The greatest difference was found in the Numerical Ability subtest, on which the mean for the primary-entry Ottawa group was at the 70th percentile, for the primary-entry Carleton and late-entry Ottawa groups at the 75th percentile, and for the late-entry Carleton group at the 80th percentile. In Abstract Reasoning, the primary-entry Ottawa group mean was at the 80th percentile while those for the other three groups were at the 85th percentile.

In the spring of 1979 it had been found that the Ottawa primary-entry group had scored significantly higher on the Nonverbal subtest of the Canadian Cognitive Abilities Test than the late-entry group, although the difference in the Verbal subtest was not significant. Another finding of the previous year was that the Ottawa primary-entry group had a significantly higher nonverbal score than the Carleton group in the same program. Since the content of the tests used in successive years is somewhat different, it is not appropriate to make generalizations from these results.

Achievement

In this section results are presented for the four grade 8 immersion groups on the battery of achievement tests given in the spring of 1980. As mentioned earlier, a comparison group in the regular English program in each board also did these tests. However, since scores on the aptitude measures discussed in the preceding section indicated considerable difference in ability between English-program and immer-

sion groups, it will be necessary to adjust the scores before comparisons can be made. These results will be presented in a subsequent report.

Reading. Results for the Gates-MacGinitie Reading Test given to Ottawa grade 8 students are shown in Table 5.11 for the primary- and late-entry students in that board. The two immersion groups showed no significant difference in either the Vocabulary or Comprehension subtest mean scores. This result differs somewhat from that obtained one year earlier when the relatively small primary-entry group of that year showed higher scores on the Vocabulary subtest.

TABLE 5.11

READING ACHIEVEMENT RESULTS FOR PRIMARY- AND LATE-ENTRY IMMERSION GROUPS, OTTAWA, SPRING 1980

Subtest	Primary-entry			Late-entry		
	Mean	SD	N	Mean	SD	N
Vocabulary	28.3	6.1	149	27.6	5.9	120
Comprehension	41.2	7.5	149	42.0	6.0	120

These results may also be compared to the norms of this test based on the results of 2307 grade 8 Ottawa Board students tested in the fall of 1976. The means for both immersion groups were found to be at the 70th percentile in Vocabulary and at the 60th percentile in Comprehension.

Language and Study Skills. As noted earlier, the Language and Work-Study Skills tests of the Canadian Tests of Basic Skills (CTBS) were administered to the various groups in order to examine achievement in these areas. Results on these subtests are shown in Table 5.12.

No significant differences between the primary- and late-entry groups in the same board were found.

TABLE 5.12

CTBS RESULTS FOR PRIMARY- AND LATE-ENTRY IMMERSION GROUPS, OTTAWA AND CARLETON, SPRING 1980

Board and subtest	Late-entry			Primary-entry		
	Mean	SD	N	Mean	SD	N
Ottawa						
L1: Spelling	29.6	8.7	116	29.6	7.8	148
L2: Capitalization	23.9	5.6	116	24.5	6.4	147
L3: Punctuation	24.5	6.2	117	24.5	6.6	147
L4: Usage	18.7	5.1	117	18.2	4.6	149
Carleton						
L1: Spelling	30.2	8.3	148	30.1	8.0	53
L2: Capitalization	27.8*	5.4	148	25.8	5.9	53
L3: Punctuation	26.0	6.5	148	26.1	6.3	54
L4: Usage	19.5	4.3	149	19.0	5.2	54
Ottawa						
W1: Map Reading	22.1	6.7	120	21.4	6.0	148
W2: Graphs and Tables	16.8	4.7	119	17.9	4.2	147
W3: Reference Materials	38.3	8.7	117	38.2	7.2	148
Carleton						
W1: Map Reading	25.7*	5.9	145	24.3*	6.6	53
W2: Graphs and Tables	19.0*	4.1	144	17.3	4.3	53
W3: Reference Materials	41.6*	6.7	144	38.4	9.1	53

* Mean of this group is significantly greater than that of the corresponding group in the other board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

It is also of interest to examine differences between boards for both the primary- and late-entry programs. The only significant difference in the four language subtests was on Capitalization, where the Carleton late-entry group performed better than the Ottawa late-entry group ($p < 0.05$). On all three Work-Study subtests the Carleton late-entry group had a significantly higher mean score than did the

Ottawa late-entry group ($p < 0.05$). In addition, the Carleton primary-entry student group performed significantly better than the Ottawa primary-entry group in Map Reading Skills ($p < 0.05$).

English cloze and composition. Table 5.13 gives results on the English cloze test (English Story Completion Test) for the four immersion groups. No significant differences exist between any of the groups on this test.

TABLE 5.13

ENGLISH CLOZE TEST RESULTS, PRIMARY- AND LATE-ENTRY IMMERSION GROUPS, OTTAWA AND CARLETON, SPRING 1980

Board	Late-entry			Primary-entry		
	Mean	SD	N	Mean	SD	N
Ottawa	23.3	3.7	117	23.6	3.6	141
Carleton	24.1	3.5	141	23.4	4.0	54

Several measures derived from the English composition are available for a group of from 45 to 55 students from each immersion program in both boards, as seen in Table 5.14. The four groups did not differ significantly on average sentence length or the percentage of errors in their written compositions. In total passage length, no significant differences were apparent between the two Ottawa Board programs or between the Ottawa and Carleton boards in either program; however, the Carleton primary-entry group did write significantly longer passages than did the late-entry group in the same board. There were no significant differences in the proportion of adjectives or adverbs used by the different groups. However, the Carleton late-entry

immersion group used significantly more prepositions per 100 words than the Ottawa late-entry group.

TABLE 5.14

ENGLISH COMPOSITION TEST RESULTS, PRIMARY- AND LATE-ENTRY IMMERSION GROUPS, OTTAWA AND CARLETON, SPRING 1980

Board and measure	Late-entry			Primary-entry		
	Mean	SD	N	Mean	SD	N
Ottawa						
Total length	212.5	96.9	53	203.0	72.4	45
Average sentence length	16.3	3.9	53	15.4	3.5	45
Errors per 100 words	7.4	3.7	53	6.7	3.0	45
Adjectives per 100 words	5.9	2.3	53	6.2	2.6	45
Adverbs per 100 words	6.2	2.3	53	6.1	2.2	45
Prepositions per 100 words	7.4	2.4	53	8.5	2.8	45
Carleton						
Total length	170.5	56.4	45	219.8#	73.9	54
Average sentence length	14.5	3.5	45	15.4	3.5	54
Errors per 100 words	6.8	4.1	45	5.5	3.3	54
Adjectives per 100 words	7.1	2.7	45	7.1	2.7	54
Adverbs per 100 words	7.3	3.0	45	6.4	1.9	54
Prepositions per 100 words	8.9*	2.5	45	8.5	2.9	54

Mean of this group is significantly greater than that of the other group from the same board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

* Mean of this group is significantly greater than that of the group from the other board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

Mathematics. Table 5.15 presents the results on the two CTBS mathematics subtests and on the DAT Numerical Ability test. It will be observed that the Carleton late-entry group performed significantly better than the primary-entry group in that board on all three measures of mathematics: mathematics concepts, mathematics problem solving and numerical ability. This group also had significantly higher mean scores on the two CTBS mathematics measures than the Ottawa late-entry group.

TABLE 5.15

MATHEMATICS RESULTS FOR PRIMARY- AND LATE-ENTRY IMMERSION GROUPS, OTTAWA AND CARLETON, SPRING 1980

Board and test	Late-entry			Primary-entry		
	Mean	SD	N	Mean	SD	N
Ottawa						
CTBS M1: Concepts	31.5	6.3	116	31.5	6.6	150
CTBS M2: Problem Solving	18.0	5.2	115	17.7	5.0	150
DAT Numerical Ability	24.0	6.9	114	22.7	6.8	145
Carleton						
CTBS M1: Concepts	34.8#*	6.4	148	30.1	7.0	52
CTBS M2: Problem Solving	20.6#*	5.3	149	17.7	4.4	52
DAT Numerical Ability	26.5#	6.5	81	23.0	6.3	49

* Mean of this group is significantly greater than that of the group from the other board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

\# Mean of this group is significantly greater than that of the other group from the same board (significance based on a Scheffé pairwise comparison test, $p < 0.05$).

SUMMARY

This chapter presents information on the French proficiency and general achievement of primary- and late-entry French immersion groups at the grade 8 level in the Ottawa and Carleton Boards of Education.

When results of three tests of French proficiency in reading and language were examined, it was found that the only significant difference between the primary-entry groups was on the Test de français on which the Carleton group scored higher, although in the previous year this group had scored consistently better on four of these or similar tests. No significant differences were found between the late-entry groups on these measures. As might be expected, each primary-entry

group performed significantly better than the late-entry group in the same board on the three tests.

On compositions written in French, no significant differences were detected between the primary-entry groups with respect to passage or sentence length or average number of errors. The Carleton late-entry group had a significantly smaller percentage of errors than the corresponding Ottawa group. When the primary- and late-entry groups were compared within each board, it was found that both primary-entry groups wrote longer passages with a smaller percentage of errors, although the sentence lengths were not significantly different.

Samples of students from each of the two programs and boards took an individual oral interview test in French. The distributions of the two primary-entry groups differed significantly, with much less variability in the Carleton group. All of the Carleton students and less than 60 per cent of those in Ottawa were classified at a competency level of 2+ or higher. (See Table 5.8 and accompanying text.) The late-entry groups were more similar in performance, although significantly higher percentages of Carleton students reached the higher levels than did those in Ottawa. In both boards, the primary-entry group had better results than the late-entry group.

There were no significant differences in mean scores on the ability measures between the primary-entry or between the late-entry groups of the two boards, or between the primary- and the late-entry group in Ottawa. However, in Carleton the late-entry group performed significantly better on Numerical Ability than the primary-entry group.

The students were also given several measures in English of achievement in various skill areas. In English vocabulary and compre-

hension, the Ottawa primary- and late-entry groups did not differ significantly, nor were such differences found in Language and Work-Study Skills between the primary- and late-entry groups in either board. The Carleton late-entry group had significantly higher mean scores on the three Work-Study Skills subtests as well as on the Capitalization subtest of the Language test. The only difference between the primary-entry groups occurred with the Map Reading subtest of the Work-Study test, on which the Carleton group performed significantly better than the corresponding Ottawa group.

No significant differences were found between any of the four groups on the English Cloze test or the average sentence length or percentage of errors in their written compositions in English. The Carleton primary-entry group was found to write significantly longer passages than the late-entry group in that board. Although the different groups showed no significant differences in the proportion of adjectives or adverbs used, the Carleton late-entry group used a higher percentage of prepositions than the Ottawa late-entry group.

The Carleton late-entry group performed significantly better than the primary-entry group in that board on all three measures of mathematics and had significantly higher mean scores than the Ottawa late-entry group on two of the measures.

It will be important to re-examine the French proficiency of these various groups at different stages of the secondary level to determine whether the differences found between the primary- and late-entry groups diminish with successive years of exposure to French instruction. It will also be useful to monitor aspects of general achievement and French proficiency at the grade 8 level in order to examine trends in successive groups of students entering immersion at different stages.

Chapter Six

STUDENT TRACING: THE K-71 AND K-74 COHORTS

INTRODUCTION

Almost since its inception, the FRENCH Project has been involved in the tracing of students as they pass through the various French programs available in the Ottawa and Carleton Boards of Education. In order to ascertain that the groups tested have indeed been associated with tne complete program whose effects are being measured and to answer a variety of questions about student movement, a system of tracing has been developed in which a student's school, grade level and program is recorded at the beginning and end of each school year.

In 1971, the first year a primary-entry immersion program was generally available in the Ottawa area, seventeen schools in the Ottawa and Carleton Boards offered this option to students entering kindergarten. All but two of these schools also offered the usual kindergarten program with English as the language of instruction. It was decided to follow the progress of that group of students, which came to be designated as the K-71 cohort, consisting of about 450 immersion students and 400 in the English program who started kindergarten in the fall of 1971 at one of the seventeen schools offering immersion at that time.

It was later felt to be advisable to follow another later cohort in the immersion program to eliminate those effects due to the novelty and experimental nature of the immersion program in 1971. This group, known as the K-74 cohort, consisted of all students who began kindergarten in an Ottawa Board school in the fall of 1974 and included about 480 immersion and over 1500 English-program students in 55 schools, 9 of whom offered French immersion kindergarten at that time.

A number of FRENCH Working Papers have dealt with various aspects of the progress of these two cohorts and further information was given in the Sixth Annual Report of the Project in 1979. Data presented in that report were based on the status of students in the two cohorts as of October 1978. At that time departure rates, grade progress and program location were examined for the English and immersion subgroups of both cohorts, with particular emphasis on students who had transferred from the primary-entry immersion program. Responses to a questionnaire and scores on standardized tests were also used in an attempt to gain further understanding of these transfer students.

The present report presents data concerning the status of the K-71 and K-74 cohorts as of October 1979, when the expected grade levels of these groups were 8 and 5, respectively. Information will be given for each cohort, with comparisons where relevant.

GRADE AND PROGRAM LOCATION

The K-71 Cohort

As already mentioned, the expected grade level of K-71 cohort members in the fall of 1979 was grade 8. However, actual grade levels ranged from 6 to 10, with members of the group appearing in 40 elementary and 14 secondary schools in the area. A variety of programs emphasizing French instruction existed in Ottawa and Carleton schools at these levels, including extended French in a few Carleton schools, and late-entry immersion in grades 6 to 8 in Ottawa and grades 7 and 8 in Carleton, as well as kindergarten-entry immersion programs. Besides the regular English programs, the Ottawa system offered an enriched program in grades 5 to 8 and special education classes existed in a number of schools. Several versions of a high school bilingual program

were offered in the two boards, where students were able to take from two to four courses in French; these may be entered after completing either the primary- or the late-entry immersion program, or, in some cases, after taking core French up to grade 8.

Table 6.1 gives an overall outline of the grade and program location of K-71 cohort members, while the two following tables use the same data to focus on program retention and grade progress, respectively, of the two cohort subgroups. The departure group consists of students who are no longer in schools of the two boards, and includes students in separate or private schools in Ottawa as well as those who have left the area. It can be seen from Table 6.1 that departure rates for the original English and the original immersion groups are similar: 39 per cent from the English group and 36 per cent from immersion.

Of the students from the initial immersion group who remained in the Ottawa-Carleton area, about two thirds were still in a program emphasizing French instruction, including both primary- and late-entry immersion, a high school bilingual program and extended French. About 12 per cent of the students from the original English group have also joined one of these programs. This information is shown in Table 6.2.

TABLE 6.1

GRADE AND PROGRAM OF K-71 COHORT, OCTOBER 1979

Program	Grade level	Number of students from original group	
		Immersion	English
Primary-entry immersion	7	15	0
	8	152	5
Late-entry immersion	7	2	0
	8	9	11
High school bilingual program	9	7	5
	10	1	0
Extended French	8	4	8
Regular English program	6	2	5
	7	25	55
	8	53	120
	9	3	19
Enriched English program	7	0	1
	8	11	7
Special education	-	2	8
Total still in system		286 (64%)	244 (61%)
Departures from system		162 (36%)	155 (39%)
Total originally in cohort		448	399

TABLE 6.2

PROGRAM LOCATION OF K-71 COHORT STUDENTS STILL IN OTTAWA OR CARLETON SCHOOLS, OCTOBER 1979

Program	Number of students from original group	
	Immersion	English
Primary-entry immersion	167	5
Late-entry immersion	11	11
Bilingual high school	8	5
Extended French	4	8
	190 (66%)	29 (12%)
Regular English program	83	199
Enriched English program	11	8
Special education	2	8
	96 (34%)	215 (88%)

Table 6.3 considers the grade progress of students from the K-71 cohort who have remained in their original program. It can be seen from this table that a lower percentage of the immersion group is below the expected level (grade 8) and also a lower percentage of this group is above the expected grade level. Acceleration was difficult for many students from the initial immersion group, since at a number of the schools involved there was no immersion class in the grade ahead.

TABLE 6.3

GRADE PROGRESS OF K-71 COHORT STUDENTS STILL IN ORIGINAL PROGRAM, OCTOBER 1979

Grade level	Students from original group			
	Immersion		English	
	Number	Per cent	Number	Per cent
6	0	0	5	2
7	15	8	55	8
8	152	87	120	60
9	7	4	19	10
10	1	1	0	0
All grades	175	100	199	100

The K-74 Cohort

By the fall of 1979, the typical student in the K-74 cohort was starting grade 5; however, actual grade levels ranged from 2 to 6, including students in 57 Ottawa Board and 52 Carleton Board schools. Of the nine Ottawa Board schools offering immersion at this level, one had changed to an immersion centre with immersion only at grades K through 5. In addition to the regular English and primary-entry immersion programs, enriched classes at the grades 5 and 6 levels in Ottawa and late-entry French immersion grade 6 classes were offered in some Ottawa Board schools. Special education classes existed in a number of schools in both boards. Table 6.4 presents a summary of the October 1979 status of the K-74 cohort. Departure rates were 28 per cent from the immersion and 31 from the English group.

TABLE 6.4

GRADE AND PROGRAM OF THE K-74 COHORT, OCTOBER 1979

Program	Grade level	Number of students from original group	
		Immersion	English
Primary-entry immersion	4	5	4
	5	191	10
	6	23	0
Late-entry immersion	6	0	4
Regular English program	2	0	1
	3	1	7
	4	18	161
	5	79	683
	6	3	60
Enriched English program	5	13	25
	6	4	7
Special education	-	9	91
Total still in system		347 (72%)	1052 (69%)
Departures from system		133 (28%)	482 (31%)
Total originally in cohort		480	1534

Table 6.5 uses the data given in the above table to focus on program location of the students from the K-74 cohort. Over 60 per cent of the immersion group still in the area remained in that program, while 5 per cent had left to join an enriched English class. Of the original English group still in the area, 87 per cent were still in that program and 3 per cent had entered an enriched class.

TABLE 6.5

PROGRAM LOCATION OF K-74 COHORT STUDENTS STILL IN OTTAWA OR CARLETON SCHOOLS, OCTOBER 1979

Program	Number of students from original group	
	Immersion	English
Primary-entry immersion	220	14
Late-entry immersion	0	4
	220 (63%)	18 (2%)
Regular English program	101	911
Enriched English program	17	32
Special education	9	91
	127 (37%)	1034 (98%)

The data in Table 6.6 show that, of the groups remaining in their original program, 87 and 75 per cent of the immersion and English groups, respectively, were at the grade 5 or expected level in the fall of 1979. A much smaller percentage (3 as compared to 18 per cent) of immersion than of English-program students were below this grade level, while a slightly higher percentage of immersion students was above the expected grade level. Over all, only 10 per cent of the immersion group was below grade or in special education, as opposed to 25 per cent of the English group.

TABLE 6.6

GRADE PROGRESS OF K-74 COHORT STUDENTS STILL IN ORIGINAL PROGRAM, OCTOBER 1979

Grade level	Students from original group			
	Immersion		English	
	Number	Per cent	Number	Per cent
2	0	0	1	0
3	0	0	6	1
4	6	3	161	18
5	191	87	683	75
6	23	10	60	6
All grades	220	100	911	100

TRANSFERS

The K-71 Cohort

The transfer group of the K-71 cohort consisted of 111 children from the initial immersion subgroup who, as of October 1979, were still in Ottawa or Carleton schools but were no longer in the primary-entry immersion program. They represent 39 per cent of the total of 286 students from the immersion subgroup who were still in the system at that time. Table 6.7 compares the fall 1979 grade and program of these transfer students with those of the initial English group. It may be seen from this table that these two groups were very similar with respect to the proportion below expected grade level as of October 1979. About 10 per cent of the initial English group had joined a program emphasizing French instruction, and nearly 14 per cent of the transfers had rejoined a program of this type.

TABLE 6.7

GRADE AND PROGRAM OF TRANSFER AND INITIAL ENGLISH GROUPS
FROM K-71 COHORT, OCTOBER 1979

	Transfer group		Initial English group	
	Number	Per cent	Number	Per cent
Below grade 8				
Late-entry immersion	2		0	
Regular English program	27		60	
Enriched English program	0		1	
Special education	2		8	
	31	28	69	29
Grade 8				
Late-entry immersion	9		11	
Extended French	4		8	
Regular English program	53		120	
Enriched English program	11		7	
	77	69	146	61
Grade 9				
High school bilingual	0		5	
Regular English program	3		19	
	3	3	24	10
Total in group	111	100	239	100

Transfers have been classified according to when they left the immersion program, as shown in Table 6.8. It will be seen that over half of students transferring did so before entering grade 2.

TABLE 6.8

TRANSFERS FROM PRIMARY-ENTRY IMMERSION GROUP OF THE K-71 COHORT BY TIME OF TRANSFERRING, 1971-1979

Time of transferring	Number of students
By beginning of grade 1 (October 1972)	39
During or end of grade 1 (1972-73)	20
During or end of grade 2 (1973-74)	11
During or end of grade 3 (1974-75)	4
During or end of grade 4 (1975-76)	7
During or end of grade 5 (1976-77)	10
During or end of grade 6 (1977-78)	7
During or end of grade 7 (1978-79)	13
Total	111

Three subgroups of the transfer group have been considered: students who left the immersion program during or at the end of their kindergarten year, those who left during grade 1 or 2 and those who left during grade 3 or later. The grade placement, program location and sex of students in these three subgroups have been determined, as shown in Tables 6.9, 6.10 and 6.11. As was found with this cohort at an earlier stage (FRENCH Working Paper 128), transfers during grade 1 or 2 were more likely to be below grade and fewer tended to be in extra French programs. Groups of boys and girls were not found to differ significantly with respect to either time of transfer nor present grade level, although it is noteworthy that two thirds of the transfers were boys.

TABLE 6.9

GRADE PLACEMENT IN OCTOBER 1979 BY TIME OF TRANSFER
FOR K-71 COHORT TRANSFER GROUP

Time of transfer	Number of students as of October 1979		
	Below grade/ special ed.	At or above grade	Total
During or end of kindergarten	7	32	39
During grade 1 or 2	16	15	31
During grade 3 or later	8	33	41
Total	31	80	111

$\chi^2 = 12.847$, df = 2, $p < 0.01$

TABLE 6.10

PROGRAM IN OCTOBER 1979 BY TIME OF TRANSFER
FOR K-71 COHORT TRANSFER GROUP

Time of transfer	Number of students as of October 1979				
	Regular English	Enriched English	Extra French	Special Education	Total
During or end of kindergarten	28	3	8	0	39
During grade 1 or 2	26	3	0	2	31
During grade 3 or later	29	5	7	0	41
Total	83	11	15	2	111

TABLE 6.11

SEX BY TIME OF TRANSFER FOR K-71 COHORT TRANSFER GROUP

Time of transfer	Number of students		
	Boys	Girls	Total
During or end of kindergarten	27	12	39
During grade 1 or 2	21	10	31
During grade 3 or later	25	16	41
Total	73	38	111

$\chi^2 = 1.613$, df = 2, ns

The foregoing results are based only on the October 1979 status and the initial group of the students involved; the sometimes unusual patterns of movement that students have followed between their initial and final points have not been taken into account. For instance, one student left the immersion program at the end of kindergarten to attend a French private school, returned to the Ottawa Board system for grade 8 in the English program and in October 1979 was in a bilingual grade 9. Another student left immersion at the end of grade 5, spent two years in an English grade 6 program, and in October 1979 was in late-entry immersion at the grade 7 level. At least five students appear to have opted for enrichment rather than continuing with their immersion program; one of these has since joined a late-entry immersion program combined with enrichment.

A number of students have left the public school system or the city for a year or more; the tendency is for these students not to return to the immersion stream when they return to the Ottawa or Carleton system. For example, two students left during their first year to attend a Jewish school; one returned to a regular program in grade 4 and is now in late-entry immersion, while the other returned to an English grade 8 in the fall of 1979.

There are also examples of students moving directly from the primary- to the late-entry immersion streams. Some below-grade transfers have fallen behind before leaving immersion and others have done so since that time. Two students from the English subgroup of the cohort have tried late-entry immersion and later transferred back to the regular program. Some students have spent some time in special classes but have since returned to the regular English stream.

It could also be claimed that the data given previously do not give a complete picture of the transfer students since only those students still present in Ottawa and Carleton Board schools as of October 1979 are included. In addition to the numbers given in the foregoing tables, some 40 students have left immersion for another program within the system prior to leaving the system for other destinations, including separate and private schools in the area as well as locations outside the city. Ten of these students are in local separate or private schools (one in a French school), while the remainder have generally left the Ottawa-Carleton area. An additional 29 students have moved directly from immersion to separate or private schools in the Ottawa area; it is not known how many remain in these schools. However, it appears that a half dozen of them did move to French schooling, another 11 to English separate schools and 12 to English private schools.

The K-74 Cohort

The transfer group of the K-74 cohort includes 127 children from the initial immersion subgroup who are still in Ottawa or Carleton schools in a program other than primary-entry immersion; this group represents 36 per cent of the total immersion group still in local schools. Table 6.12 compares the transfer students and the initial English group with respect to October 1979 program and grade level. It can be seen that the distribution of grade and program of the transfer students is similar to that of the initial English subgroup.

TABLE 6.12

GRADE AND PROGRAM OF TRANSFER AND INITIAL ENGLISH GROUPS FROM K-74 COHORT, OCTOBER 1979

Program and grade	Transfer group		Initial English group	
	Number	Per cent	Number	Per cent
Below grade 5				
Regular English	19		168	
Special education	9		91	
	28	22	259	25
Grade 5				
Regular English	79		683	
Enriched English	13		25	
	92	72	708	68
Grade 6				
Regular English	3		61	
Enriched English	4		7	
Late-entry immersion	0		3	
	7	6	71	7
Total in group	127	100	1038	100

For the period up to the beginning of grade 5 or the sixth year of school, Table 6.13 shows the time of transferring from the immersion program for those students still in the Ottawa or Carleton Boards. The largest proportion of these students left immersion during or at the end of their kindergarten year, while the smallest number transferred during or at the end of their grade 1 year. One would expect to find larger numbers transferring between grades 4 and 5, since this is the level at which students in Ottawa may enter an enriched

English program. The pattern of transfers for this cohort appears somewhat different from that noted earlier for the K-71 group, with proportionately more of the later cohort leaving during grade 3 or later.

TABLE 6.13

TRANSFERS FROM THE PRIMARY-ENTRY IMMERSION GROUP OF THE K-74 COHORT BY TIME OF TRANSFERRING, 1974-1979

Time of transferring	Number of students
By beginnning of grade 1 (October 1975)	36
During or end of grade 1 (1975-76)	17
During or end of grade 2 (1976-77)	23
During or end of grade 3 (1977-78)	27*
During or end of grade 4 (1978-79)	24**
Total	127

* One of these students had entered immersion from the English group.

** 14 of these students entered an enriched English grade 5.

For the original immersion subgroup transfers, time of transfer in relation to grade progress, program location and sex are shown in Tables 6.14 to 6.16. Students who transferred during or at the end of their second year of schooling are somewhat more likely to be below grade or in special education than earlier or later transfers.

TABLE 6.14

GRADE PLACEMENT IN OCTOBER 1979 BY TIME OF TRANSFER
FOR K-74 COHORT TRANSFER GROUP

Time of transfer	Number of students as of October 1979		
	Below grade/ special ed.	At or above grade	Total
During or end of kindergarten	10	26	36
During grade 1 or 2	12	28	40
During grade 3 or later	6	45	51
Total	28	99	127

$\chi^2 = 5.29$, df = 2, ns

TABLE 6.15

PROGRAM IN OCTOBER 1979 BY TIME OF TRANSFER
FOR K-74 COHORT TRANSFER GROUP

Time of transfer	Number of students as of October 1979			
	Regular English	Enriched English	Special education	Total
During or end of kindergarten	32	0	4	36
During grade 1 or 2	34	2	4	40
During grade 3 or later	45	15	1	51
Total	101	17	9	127

TABLE 6.16

SEX BY TIME OF TRANSFER FOR K-74 COHORT TRANSFER GROUP

Time of transfer	Number of students		
	Boys	Girls	Total
During or end of kindergarten	25	11	36
During grade 1 or 2	16	24	40
During grade 3 or later	30	21	51
Total	71	56	127

$\chi^2 = 7.04$, df = 2, $p < 0.05$

Of the transfer group, 56 were girls and 71 were boys. In the group transferring during the first year (kindergarten) there were more than twice as many boys as girls, and similarly in the group transferring during grade 3 or later, the boys outnumbered the girls by a considerable margin. However, in the group transferring during the second or third year of school, the ratio of girls to boys was three to two. There was a tendency for a greater percentage of boy transfers to be below grade level or in special education, as shown in Table 6.17.

TABLE 6.17

GRADE LEVEL BY SEX FOR TRANSFER GROUP OF THE K-74 COHORT

Grade level	Boys		Girls	
	Number	Per cent	Number	Per cent
Special education	7	10	2	4
Grade 3	1	1	0	0
Grade 4	11	16	7	12
Grade 5	50	70	42	75
Grade 6	2	3	5	9
Total	71	100	56	100

The data in the preceding tables do not include those 21 students who have been classified as "departures" since their transfer to another program within the system from the immersion program. Five of these pupils are in local separate schools, while the rest have generally left the Ottawa-Carleton area.

Again it must be pointed out that the foregoing analyses have taken into account only the original and October 1979 status of the students involved. In this cohort, as in the K-71 group, a few individual pupils have shown rather unusual patterns of movement in the interim. For instance, several students had left the country and returned; several of these were original immersion students who entered the regular English program on returning to the area. Another student apparently repeated grade 4 and was then ready to rejoin his peers in grade 6. One student classified as a special education student who had transferred from the immersion program was actually in a class for children with a specific physical handicap and doing work at her expected grade level. Several other students had spent time in special education classes, but were back in the regular English program at the expected level by October 1979.

The patterns observed in the K-74 cohort by the beginning of the 1979-80 school year are generally similar to those noted in earlier years (W.P. 128). However, there appear to be some differences between the K-71 and the K-74 cohorts in the composition of the transfer groups (Tables 6.8 and 6.13). Similar percentages from each cohort left immersion during their first two years of school but the transfer rate in the K-74 cohort did not decrease as sharply after the grade 1 year. Moreover, it should also be pointed out that many of the transfers from the K-74 cohort at the end of grade 4 opted for an enriched program as an alternative to immersion, and the per cent who transferred to other programs was smaller than it had been for any year up to that time.

NEW ENTRANTS

The K-71 Cohort

The tracing procedure has also included the follow-up of students from outside the original cohort groups who joined primary-entry immer-

sion classes at the expected levels of the two cohorts. These new entrants to the primary-entry stream generally came from outside the city, but the group also includes some students who have always been in immersion in the Ottawa-Carleton area but who have moved a grade ahead of or behind their expected level.

The grade and program of the new entrant group for the K-71 cohort is shown in Table 6.18. A total of 95 students had joined the primary-entry immersion stream and remained in Ottawa and Carleton schools up to October 1979; another 29 new entrants had left the system again, two of them having transferred from immersion before departing. Of the 95 still in Ottawa or Carleton schools, 80 (or 84 per cent of this group) were still in the primary-entry immersion program at the expected level, while only 10 (or 11 per cent) had transferred to the English stream.

TABLE 6.18

GRADE AND PROGRAM OF NEW ENTRANTS ASSOCIATED WITH K-71 COHORT, OCTOBER 1979

Program	Grade level	Number of new entrants
Primary-entry immersion	7	1
	8	80
Late-entry immersion	8	1
High school bilingual program	9	2
Regular English program	7	1
	8	9
Enriched English program	8	0
Extended French	8	0
Total still in system		95
Departures		29
Total in group		124

The K-74 Cohort

Table 6.19 presents information on the October 1979 status of the K-74 new entrant group. For both cohorts, it appears that the retention rate of new entrant groups within a program emphasizing French instruction is relatively high. However, no account is taken of the time of entering the local immersion class, the previous program nor the age of the student, so that direct comparison with cohort groups is not possible.

TABLE 6.19

GRADE AND PROGRAM OF NEW ENTRANTS ASSOCIATED WITH K-74 COHORT, OCTOBER 1979

Program	Grade level	Number of new entrants
Primary-entry immersion	4	1
	5	86
	6	9
Regular English program	4	4
	5	17
	6	1
Enriched English program	5	7
Special education	-	1
Total still in system		126
Departures		32
Total in group		158

SUMMARY

Student tracing information has facilitated the accurate description of student groups tested at the grade 8 level in the spring of 1980, whose results are presented in the previous chapter. When examining the grade 8 results, it may be remembered that they include over half the

students who started immersion kindergarten in the fall of 1971 and who have remained in Ottawa or Carleton schools. These students constitute about two thirds of the grade 8 primary-entry immersion groups in Ottawa and Carleton, while the remaining third consists of the new entrants mentioned in the previous section.

Those students who have transferred from the immersion program do not appear to differ in grade level or program location as of October 1979 from those students who began in the English program in the same schools in the fall of 1971. Relatively few students from the K-71 cohort have left immersion after grade 2, and a smaller percentage of immersion than of English-program students was below the expected grade level as of October 1979; these facts suggest a generally stable program which meets the needs of the majority of students. When data regarding the fall 1980 grade and program placement of the students in this cohort are available, it will be possible to answer a variety of interesting questions about the choices these students make at the transition to high school.

More students from the K-74 immersion subgroup appear to have left the program at the grade 3 or 4 level than was the case with the earlier cohort. Will this trend continue? Is this evidence that the program generated more enthusiasm and higher performance when it was new and experimental than it does in its maintenance phase? These and other questions may be answered by continued tracing o these two cohorts of students.

Chapter Seven

SUMMARY

INTRODUCTION

During the seven-year period from 1973 to 1980 various new alternative programs for teaching French as a second language have been introduced in the schools of the Ottawa and Carleton Boards of Education. These have included new core and extended French programs involving more time spent in French, as well as immersion and bilingual programs at the elementary and secondary levels.

The Ministry of Education, Ontario, and the boards themselves have carried out continuing evaluations of various aspects of these programs. Since the 1973-74 school year contracts with the Ministry of Education have supported research studies focusing on a variety of topics. As part of the contract for 1980, the French proficiency of core French students at the grade 8 level in both boards has been examined and that of primary-entry, late-entry, and bilingual high school students at the grade 8, 10 and 12 levels. In addition, tests of basic skills in English were given to grade 8 immersion students and to comparison students in the English program. Details of the actual tests used will be found in the body of the report. As in previous years, tracing of students enrolled in various programs continued to make it possible to examine enrolment patterns and to identify subgroups for more intensive study.

Chapter Two of the Seventh Annual Report of the FRENCH Project provides results of the 1980 testing of students in the core programs Although it was not part of the original contract, the research team also undertook to summarize data on the French proficiency of students

in these programs, and this summary is presented in Chapter Three. Chapter Four contains results for students in grades 10 and 12 of bilingual high schools, while an overview of the French proficiency and general achievement of students in primary- and late-entry immersion will be found in Chapter Five. Data from tracing studies are given in Chapter Six. A brief summary of results obtained for each group follows; in each case the pages in this report and the related working papers which describe the results are indicated.

CORE FRENCH: GRADES 6-8, 1978-1980 (pp. 4-33, 59-62; W.P. 133)

The leading edge of the 40-minute daily core French program which had begun at the kindergarten level in 1971 in the Ottawa Board of Education had reached grade 8 by 1979-80 and had a cumulative total of 1050 hours of French instruction. Because of a change in the pattern of instruction in Carleton schools, the 1980 grade 8 in that system will be the last one to receive 705 hours of instruction, starting with 20 minutes daily from kindergarten to grade 5. In order to be able to make comparisons with results obtained earlier in grades 6 and 7, the same listening comprehension test (IEA II) was given to a grade 8 sample in each board. A locally developed test was also used with a sample of grade 7 and 8 students in Ottawa in order to examine changes across grade levels.

In both boards, a 20 per cent subsample of those who took the IEA listening comprehension test also took a five-part French speaking test. In addition, a scholastic aptitude test was given to all students as a means of checking the equivalence of samples and, where necessary, adjusting scores appropriately.

Listening comprehension scores were significantly higher for those grade 8 students with a total of 1050 hours of French instruction from

K to 8, as compared with those who had a cumulative total of 705 hours, both before and after adjustment for differences in ability. Similar differences had been found in previous years at earlier grade levels.

On the listening comprehension test given in the years from 1978 to 1980 to students in the leading edge of the Ottawa 40-minute program and to groups at the same level in Carleton, students at the grade 6, 7 and 8 levels in the former group, with more cumulative time in French, performed significantly better. Relatively few students were tested in all three grades, but for a subsample of students tested in both grade 7 and 8, there was a significant increase in scores within each board between grade 7 and 8, as well as a difference between boards at each grade level. In a cross-sectional study done in 1980 at the same three grade levels, it was possible to make adjustments for differences in ability; in this study the Ottawa groups performed significantly better at the grade 6 and grade 8 levels, but at grade 7 the adjusted mean scores were almost identical.

On the total speaking test given to a relatively small sample of students in the core program of the two boards at the grade 7 level in 1979, the Ottawa sample scored higher in spite of equivalent scores on the ability and listening measures. At the grade 8 level in 1980, differences were found on the listening comprehension test but not on the total speaking test used in that year. However, on the questions used in both years and on two parts of the test used in 1980, involving responses to questions and turning statements into interrogative form, the Ottawa group had a higher mean score. The second of these subtests tended to be too difficult for many students in both boards. The experience of these two years should help in developing more appropriate

tests for use with core students at the grade 7 and 8 levels in these programs.

When the results of the listening comprehension test used in 1979 for grade 7 core French students were compared across boards by sex, it was found that, in spite of program differences, the total group of girls had a higher mean score than the total group of boys. Similar differences were found in grades 6, 7 and 8 in 1980, and the differences were even greater when scores were adjusted for ability.

INTERCORRELATIONS: GRADES 6-8, 1978-1980 (pp. 63-67; W.P. 133)

Product-moment correlations were calculated between various pairs of variables for groups tested in 1980 and earlier. Relatively high correlations (0.63 to 0.84) were found between the same listening comprehension test given at an interval of about a year and also between two different listening comprehension tests given in the same year. Correlations of the same magnitude (0.59 to 0.74) were found between the listening comprehension tests and the total speaking test scores obtained in grades 7 and 8. Similarly high correlations (0.59 to 0.81) were found among the subtests of the 1980 speaking test and between these and the two listening comprehension tests used in that year.

On the other hand, in both years correlations between listening test scores and ability measures tended to be low for grades 6, 7 and 8 (0.26 to 0.48). Correlations between total speaking test scores at the grade 7 and 8 level and the Henmon-Nelson test of scholastic aptitude were also low (0.30 to 0.44).

CORE FRENCH: GRADES 3-5, 1973-1977 (pp. 44-46; W.P. 133)

The listening comprehension tests used in the early years of the core program tended to be too difficult, especially for children in the 20-minute program, and hence did not provide a reliable measure of what had actually been learned. In spite of this limitation, the students in the 40-minute daily program scored significantly higher than their comparisons at each grade level and showed a significant gain from one grade level to the next. On the tests given at the beginning and end of the year in 1973-74, results for grades 3 and 4 in the spring were generally somewhat higher than those for grades 4 and 5, respectively, in the fall, probably because of forgetting over the summer months.

A speaking test was given to a sample of grade 3 and grade 5 students in both boards in 1975 and in 1977 respectively. These groups represented the leading edge of the 40-minute core program in Ottawa and its comparison in the 20-minute program in Carleton. In both programs the scores on the pronunciation subtest at the grade 3 level were relatively high; on the structural control and fluency subtests significant gains were made by the students in the 40-minute core program over the two-year period. Differences between the grade 3 groups in the two boards had become more pronounced by grade 5 and favoured the Ottawa group, which had spent about twice as much time in French instruction.

EXTENDED FRENCH OR CEL: GRADES 4-6, 1978-1980 (pp. 34-35, 45-48; W.P. 133)

Results for core students have continued to show a close relationship between listening comprehension scores and total instructional time But the grade 5 students in the Carleton CEL program who had about 15 per cent less total exposure than the Ottawa students at the same grade level, obtained significantly higher mean scores. These CEL students

spent about an hour daily in learning French and in learning environmental studies taught in French in grades 4 and 5, after a 20-minute daily program from kindergarten through grade 3.

A subgroup of the Carleton grade 6 group tested in 1980 was composed of students who had been enrolled in the CEL program during the two previous school years. This group had received less cumulative time in French than the Ottawa grade 6 group and about the same as the older Carleton grade 8 group. The mean score for these former CEL students was significantly higher than that of the Ottawa grade 6 group and slightly (but not significantly) higher than the mean for the Carleton grade 8 students.

The results for the CEL program in Carleton during the two years of its existence seem to show that total instructional time alone during the K-6 years is not sufficient to account for differences among groups. CEL students who spent the same total amount in the study of French or of a subject in French did better than students of the same age whose instructional time was divided evenly among the different grade levels, instead of being concentrated in grades 4 and 5.

GRADE 12 BILINGUAL PROGRAM, 1980 (pp. 88-95; W.P. 134)

At the grade 12 level five groups of students were identified: three groups in Ottawa who had entered an immersion or bilingual program from a core French program at the grade 6, 7 or 9 level, a Carleton grade 7 entry group, and an Ottawa group from French language schools. On the IEA IVS reading test, differences among the five groups in mean scores did not reach significance, but the group from French language schools did score significantly higher than two of the other groups on the IEA IV writing test, which involved a knowledge of grammar and

language usage. For grade 7 entry groups from the two boards, results on these two IEA tests showed steady increases from grade 9 to grade 12.

On a test designed for Quebec francophone students in their fourth year of secondary school, the grade 12 groups had mean scores which were between the 25th and 40th percentiles relative to the norming group on two of the subtests and slightly lower on a third subtest.

On the Test de mots à trouver, or French cloze test, the grade 12 groups who entered immersion at the grade 7 level had significantly higher scores than the grade 10 groups of similar background. Means for these grade 12 groups were higher than those for the grade 8 primary-entry immersion groups tested in 1980; means for grade 6 and grade 9 entry groups were close to those for the same primary-entry groups.

GRADE 10 BILINGUAL PROGRAM, 1980 (pp. 71-85; W.P. 134)

At the grade 10 level in 1979-80 there were bilingual programs at three Ottawa and three Carleton Board schools. About 70 students in each board had completed the late-entry immersion program before entering secondary school, with about 3000 cumulative hours of French instruction by the end of grade 10 for those in Ottawa and 2400 hours in Carleton. Two comparison groups from the bilingual program were also available. One consisted of a group of about 20 students who had attended French-language elementary schools; another group of 30 had graduated from English-language separate schools in Ottawa, but no more is known about the programs followed by these students.

The tested French proficiency of the two late-entry groups and of the separate school group tested at the grade 10 level was very similar. However, there appeared to be a tendency for the Carleton grade 7 entry group to do better than the Ottawa grade 6 entry students on a test of

writing skills, and a significant difference was found in favour of the two Ottawa groups on the listening comprehension test.

The late-entry immersion graduates from both boards, who were tested at the grade 10 levels, had significantly higher scores than they had obtained at the end of grade 8. These grade 10 students obtained scores on two of the tests which were about the same as those of the grade 8 primary-entry immersion students tested in 1980.

PRIMARY- AND LATE-ENTRY IMMERSION: GRADE 8, 1979 AND 1980 (pp. 110-127; W.P. 135)

The only one of three tests in French reading and language on which there was a significant difference in mean scores between the 1980 primary-entry groups in Ottawa and Carleton was the Test de français, developed for francophone students at the Secondaire I level in Quebec, on which the Carleton group did better. These findings differ from the grade 8 results on similar tests in 1979, when the Carleton group consistently performed better. In addition, there was no difference between the two 1980 groups on three measures derived from a test of French composition. On an oral interview test the Ottawa group had a greater range and a lower mean score.

No differences between the two primary-entry groups was found in the aptitude measures used and on most of the tests used to measure achievement in language, study skills or mathematics. On the other hand, the primary-entry groups performed significantly better than the late-entry groups on nearly all of the measures of French proficiency, as might be expected.

Differences between late-entry groups in the two boards tended not to be significant on most tests used to measure French proficiency or

general achievement. The Carleton students did, however, have higher scores on the French interview test and on several study skills tests.

On the two CTBS mathematics tests and on the DAT Numerical Ability Test the Carleton late-entry students had higher scores than those from Ottawa. They also had higher scores than the primary-entry students in their own board on these three tests, suggesting a need for further investigation with groups in later years.

RETENTION IN IMMERSION PROGRAMS

Of students who entered the initial kindergarten immersion group in 1971 and who remained in the Ottawa-Carleton area, about two thirds were still in a program emphasizing French instruction, including late-entry immersion or a bilingual high school program, by the 1979-80 school year. About 12 per cent of the students from the original 1971 English group had also joined one of these programs, and the immersion classes also contained some students who had entered immersion at another time. A higher percentage of the immersion group had remained at the expected grade level (grade 8) than in the English group. The proportions in enrichment and special education programs were less for the immersion groups than for the others. Similar patterns were observed in the K-74 cohort, most of whom were in grade 5 in the fall of 1979.

STUDENTS TRANSFERRING FROM IMMERSION PROGRAMS

The transfer group of the primary-entry immersion group in the K-71 cohort represented 39 per cent of the total of 286 students who were still in Ottawa or Carleton schools in the fall of 1979. The distributions of grade level and program for this transfer group were similar to those for the initial English group. Over half of the students who

had transferred had done so before entering grade 2. Those who had transferred during grade 1 or grade 2 were more likely than the others to be below the expected grade level, and two thirds of the total group of transfers were boys, although the original immersion groups had contained similar proportions of boys and girls. The pattern of transfers for the K-74 cohort was somewhat different, since a higher proportion left immersion during grade 3 or later.

CONCLUDING STATEMENT

The continuing evaluation of several alternative programs for teaching French as a second language in the schools of the Ottawa and Carleton boards has involved the collection of data over a seven-year period on the French proficiency, general achievement, scholastic aptitude, and attitudes of students in core and extended French programs and in various kinds of immersion programs. Although other topics have been studied during this period, the research in recent years has concentrated on measurement of various aspects of French proficiency. A variety of different tests have been used to measure listening comprehension and oral production, as well as reading and writing.

As students exposed to new core programs and extended French programs reach the grade 8 level, and graduates of the early- and late-entry immersion programs complete grade 12, it is possible to make comparisons among groups with different patterns of instruction. It appears that proficiency in French is related to total time spent in learning it as a second language, but that the distribution of time and other factors also play an important part. Questions about maintenance of skills after the immersion period and about the levels reached at the grade 12 level by primary-entry immersion students remain to be

answered. In some cases an intensive study of a specific aspect of the learning process is needed and in others the development of more sensitive measures of various outcomes of instruction. It will also be necessary to await the arrival at the grade 12 level of a sufficient number of students who have followed a specific program, such as primary-entry immersion.

The processes related to the learning of a second language are very complex, and decisions made by trustees and school administrators must be based on political and economic factors as well as on evaluation studies. However, research done at the school level can contribute to better understanding of these processes and be of assistance in the decision-making process.

REFERENCES

ANDREW, Christine M., Lapkin, Sharon and Swain, Merrill. *Report on the 1978 Evaluation of the Ottawa and Carleton French Immersion Programs, Grades 5-7.* Toronto, Ontario Institute for Studies in Education, 1978.

BENNETT, George K., Seashore, Harold G. and Wesman, Alexander G. *Differential Aptitude Tests, Forms L and M.* The Psychological Corporation, New York, 1966.

CARROLL, J.B. *The Teaching of French in Eight Foreign Countries.* International Studies in Evaluation, Vol. 5, New York, Wiley, 1975.

GATES, Arthur I. and MacGinitie, Walter H. *Gates-MacGinitie Reading Tests.* Teachers College Press, New York, 1965.

HALPERN, G., Hendelman, T., Kirby, D.M., MacNab, G.L., Martin, J.C., Tourigny, R. and Tuong, T. *The FRENCH Project.* Report submitted to the Ministry of Education, Ontario, 1974.

HALPERN, G., MacNab, G.L., Kirby, D.M., Tuong, T., Martin, J.C., Hendelman, T and Tourigny, R. *Alternative School Programs for French Language Learning.* Report submitted to the Ministry of Education, Ontario, 1975.

KING, Ethel M. (Ed.) *Canadian Tests of Basic Skills.* Thomas Nelson and Sons (Canada) Ltd., Toronto, 1977.

LINDQUIST, E.F. and Hieronymus, A.M. *Iowa Tests of Basic Skills.* Houghton Mifflin Co., Boston, 1971.

MORRISON, F., Bonyun, R., Hendelman, T., Kirby, D.M., MacNab, G.L., Martin, J.C., Tuong, T. and Wightman, M. *Alternative School Programs for French Language Learning.* Report submitted to the Ministry of Education, Ontario, 1976.

MORRISON, F., Bonyun, R., Kirby, D.M., Martin, J.C., Pawley, C., Riel, Y. and Wightman, M. *Longitudinal Evaluations of Alternative Programs for Teaching French as a Second Language.* Report submitted to the Ministry of Education, Ontario, 1977.

MORRISON, F., Kirby, D.M., MacNab, G.L., Pawley, C.A., Walsh, M.D. and Wightman, M. *Alternative Programs for Teaching French as a Second Language: Research and Evaluation.* Report submitted to the Ministry of Education, Ontario, 1978.

MORRISON, F., Bonyun, R., Pawley, C. and Walsh, M. *French Proficiency: Status of Ottawa and Carleton Students in Alternative Programs.* Report submitted to the Ministry of Education, Ontario, 1979.

SCHEFFE, H. *The Analysis of Variance.* New York, Wiley, 1959.

WIGHTMAN, M. *French Speaking Skills of Grade 6 English-Program Students*. Research Report 80-05, Ottawa, Ottawa Board of Education, 1980.

WIGHTMAN, M. *Testing the French Listening Comprehension of Grade 6 English-Program Students*. Research Report 80-07, Ottawa, Ottawa Board of Education, 1980.